X

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

PUNJAB

FOR

1887-1888.

LAHORE: PRINTED BY W. BALL & Co.,
Successors to the Punjab Printing Company
GOVERNMENT PRINTERS
1888.

No. 1217 F., dated Calcutta, the 14th December 1888.

From—W. R. LAWRENCE, Esq., *Offg. Secretary to the Government of India,*

To—*The Junior Secretary to the Government of the Punjab.*

I AM directed to acknowledge the receipt of your letter No. 420, dated the 30th August last, submitting the Progress Report of Forest Administration in the Punjab for the year 1887-88, with a review thereon by His Honour the Lieutenant-Governor.

2. The only administrative measure of importance during the year consisted in the issue of a Circular revising the connection between Revenue and Forest Officers. Further changes seem, however, to be contemplated, and the transfer of all waste lands to the management of District Forest Officers was merely delayed on account of certain unavoidable financial adjustments between Land and Forest Revenue. No alteration took place in the organization of the Department, but it is stated that the staff is short-handed, especially as regards officers of the Controlling grades.

3. The changes noted in the constitution of forest estates are to a great extent nominal only, and no new Reserved or Protected forests were added during the year. Forest Settlements of important tracts are, however, in progress, and some of these have, it is reported, been completed, awaiting only the final orders of Government. If, as inferred by the Conservator in paragraph 10 of his Report, the Financial Commissioner's Circular militates against the progress of reservation, its reconsideration would seem advisable. The question of the final disposal of rakh lands in the plains Districts of the Punjab has been greatly modified by the discovery of coal, which has lessened the demand for Railway wood-fuel, and may at any time extinguish it altogether. In these circumstances the establishment of irrigated plantations becomes unnecessary, and artificial works of the kind should henceforth be confined to Sailaba lands, where they can be established and maintained at comparatively small expense. But though it may not be advisable to extend the area of irrigated plantations, the permanent reservation of Government estates, to be set apart mainly for the growth of grass and fodder bushes, especially in tracts which now, or may at some future time, fall within the reach of canal irrigation, commends itself to the Government of India, and the remarks made in paragraphs 14 and 15 of the Conservator's Report meet with the approval of His Excellency the Governor General in Council.

The manner of living is, within the culturable parts of the Punjab, as elsewhere in India, in a state of rapid transition, and as cultivation extends and population increases, it may be expected that nomadic, and even semi-nomadic, habits will disappear. And since there can be no doubt that agricultural districts benefit largely by grass reserves and require a certain amount of other forest produce as well, it seems to His Excellency in Council expedient that areas should be set apart for these special purposes, and that they should *ab initio* be treated in accordance with the aim and principle for which they are intended.

4. The proportion of convictions to the total number of forest offences brought before the Courts decreased by 14 per cent., a fact which is not sufficiently explained.

5. The protection from fire during the hot season of 1888 was successful. His Excellency in Council has, however, read with regret the description in

paragraph 41 of the Conservator's Report of the heavy damage done by the fires which raged in the Murree and Kahuta forests during May 1887. It is evident that it will require many years of careful protection to efface the effects of the disaster, and every effort must be made in this direction.

6. The Conservator's remarks on grazing in the Government forests, and particularly those regarding the cutting and removal of grass, have been read with interest. The question becomes a more and more difficult one as the grazing lands gradually contract, but the close association which now exists between Revenue and Forest Officers will, His Excellency in Council feels confident, lead to its being carefully and equitably considered from all sides.

7. Paragraph 62 of the Conservator's Report gives an interesting account of the natural reproduction of forests in Bar land by means of root-suckers. Further attention should be given to the subject, as the observations recorded are quite new and of great importance in regard to the treatment of Bar forests.

8. The area of Regular Plantations was increased by 202 acres, that of Cultural operations by 1,139 acres. It is understood that areas not successfully operated on are not included within the increase reported.

9. The thinning out of inferior species and the operation of freeing young growth from the pressure of useless trees overhead has been attended to, and on the whole a satisfactory improvement appears to have been made in the condition of the forests. His Excellency in Council has noticed that the edible chestnut continues to do well in Bashahr and Kulu, and I am to ask that the question may be considered of extending the cultivation of this valuable food-producing tree beyond forest limits.

10. It is observed that the departmental extraction of timber and other forest produce largely decreased, and that there was also a considerable falling off in the quantity removed by purchasers. The apparent increase in the total outturn is merely due to the entry of produce extracted by right-holders, which was only partially recorded in the statements of former years. The figures thus entered are as yet only the result of estimates, for which no accuracy is claimed. The large decrease in the sale of timber and fuel has been fully explained as unavoidable, and the financial results of the year have in consequence not been favourable. The Surplus as compared with that of the previous year shows a decrease of R3,01,742, and represents only 14 per cent. of the gross Revenue against 36 per cent. in 1886-87.

11. The stock in hand has been considerably increased during the year, but, it would seem from the Lieutenant-Governor's remarks, not to the extent estimated by the Conservator.

12. His Excellency in Council endorses His Honour the Lieutenant-Governor's commendation of Colonel Bailey's services.

Government of India Central Printing Office.—No. 454 R. & A.—20-12-88.—300

Proceedings of the Hon'ble the Lieutenant-Governor of the Punjab in the Forest Department, No. 409½, dated 25th August 1888.

READ—

The Progress Report on the Forest Administration of the Punjab for the year 1887-88, submitted by the Conservator of Forests with his letter No. 845 of 19th July.

REMARKS.—The Report was submitted by the Conservator in excellent time. The orders of the Government of India in the Department of Revenue and Agriculture, Circular No. 52 G. of 14th September 1887, require it to be submitted every year and without material alteration in the arrangement followed and the details shown in the past. A summary of the Forest Administration of the year is given by Colonel Bailey in paragraph 91, and need not be repeated here. The facts recorded in the Report are for the most part uneventful, and the Lieutenant-Governor will content himself with a few brief remarks upon it.

2. Orders have been passed since the close of the year on the question of the felling of trees in the undemarcated forests of the Chamba State. The Lieutenant-Governor observes that under the provisions of the new lease an additional payment of Rs. 6,285 was made to the Rája of Chamba, and His Honor does not doubt that the Rája will meet in a willing spirit all reasonable requests regarding the felling of such trees and the reservation of further areas in the Chamba State. Good progress has been made in the introduction of a proper scheme of forest conservancy in the various minor Simla Hill States. The policy which is being pursued in regard to these promises to be very successful, and much credit is due to the Deputy Commissioner, Mr. Coldstream, and his special Assistant, Mr. McIntire, Assistant Conservator of Forests, and to the Commissioner of the Division, Colonel Grey, C.S.I., for the manner in which the policy approved by Government is being carried out.

3. The question of the treatment of the plain rakhs situated in the Bár and Thal tracts of the Province is still under the consideration of His Honor. The sudden cessation in the demand of fuel for railway purposes has greatly weakened the principal reason for attempting to close such areas against grazing to ensure reproduction, and the idea of forming fresh fuel reserves in the neighbourhood of the Sind-Ságar Railway has in consequence been abandoned under instructions received from the Government of India. The same cause has necessitated an immediate revision of the working plan of the Chánga Mánga Plantation, which was created mainly to supply fuel for the railways of the Province, and threatens to have a serious effect upon the future income of the Forest Department. As noted by the Conservator in paragraph 3, it is under contemplation to transfer to the management of Forest Officers all waste lands situated in those districts in which the closer association of Civil and Forest Officers has been carried out. The transfer is merely delayed on account of certain financial adjustments which will be necessary and which must be clearly ascertained before income and expenditure now classed under Land Revenue are transferred to the head of Forest.

4. It is satisfactory to note that the area affected by fires in 1887-88 was very small as compared with that of the previous year, when the enormous area of 134,000 acres was burnt. Special reports called for in connection with these fires have recently been submitted to Government and will be considered in due course. The area burnt during the year under review was only 10,000 acres, of which two-fifths are situated in the Kulu and Mooltan Forest Divisions. The provisions for the compounding of offences under Section 67 of the Forest Act appear to be very little used in the Province except in the Jhelum Division. The Conservator doubtless satisfies himself from time to time that

the principles laid down with the approval of the Punjab Government by the Financial Commissioner in his Circular No. 60 of 1886 are duly recognized and acted upon by all Forest Officers empowered to compound offences.

5. The remarks made by the Conservator in paragraph 46 regarding the cutting and removal of grass are interesting, and the system adopted might be followed in all cases where large areas over which the neighbouring villages have long been accustomed to graze their cattle are closed with the consent of the Revenue authorities. The general remarks made by Colonel Bailey in paragraph 45 will be considered in connection with the policy for the treatment of the Bár and Thal waste lands and the further report which he has promised on this subject in paragraph 43. The closer association of Forest and Revenue Officers will doubtless result in the careful preliminary consideration of all closings against grazing. The question of admitting only a limited number of cattle to closed areas thrown open in seasons of drought is an exceedingly difficult one to deal with practically, and the Lieutenant-Governor is disposed to think that it must be decided locally as it arises on each occasion.

6. The remarks contained in the Report regarding natural and artificial reproduction and experimental cultivation do not call for any special remarks by the Lieutenant-Governor. The observations of the Conservator in paragraph 62 regarding the natural reproduction of jhand are interesting. An attempt has been made in the present Report to estimate the amount and value of the timber and firewood and other forest produce removed by right-holders in the forests. The results stated do not profess to be other than very rough, and no doubt more reliable estimates will be gradually framed in future It does not appear if the Revenue Officers of the districts concerned were consulted in the matter, and the results stated do not appear to have been checked by any reference to the numbers of persons enjoying forest rights. In the case of the Kulu Division it is reckoned that 19,000 cubic feet of deodár wood, 3 million cubic feet of pine and other wood, and 12 million cubic feet of firewood were given to right-holders during the year. According to the recent census the population of Kulu, Wazíri-Rúpi and Seoráj amounted to 100,000 souls, and these amounts divided over this population would give roughly an average per head of 30 cubic feet of timber and 110 cubic feet of firewood respectively, or of 150 cubic feet of timber and 600 cubic feet of firewood per family of five persons. The value of the minor produce removed by right-holders in Kulu is estimated to be Rs. 1,64,000, of which Rs. 1,32,000 are entered on account of the estimated value of grass. This gives an average of Rs. 8 per family, or a little more than Re. 1-8-0 per head of population. These results appear to the Lieutenant-Governor to be very moderate, and they are probably far below the real mark. It must be remembered that the proprietary right of Government in the Forest lands in Kulu rests on the understanding that the forests will be maintained for the benefit of the people as well as of Government, and this understanding must never be forgotten in seeking to place a reasonable restriction on the amount of forest produce enjoyed by the population. Careful endeavours should be made in future years to render the estimates of forest produce removed and utilised by right-holders as correct as possible. It should also be explained briefly in the column of remarks in Forms 54 and 55 for what purposes the free grants shown therein are made.

7. The financial results of the year have not been satisfactory. The expenditure of the year had been estimated to be Rs. 6,84,000, and the income Rs. 9,74,000, but the actuals under the two heads were Rs. 6,77,912 and Rs. 7,86,927, giving a net profit of Rs. 1,09,015 as against an estimate of Rs. 2,90,000. The Conservator explains that this result is due to the fall in the price of deodár which caused this class of timber to be held back from sale at the close of the year, and to the fact that the sleepers collected for the Patiála-Bhatinda

Railway were not taken over before 31st March. Unfortunately correspondence has been before the Lieutenant-Governor since the close of the year which shows that a heavy loss must be expected with regard to the sleepers, many of which have proved of a quality below the standard fixed by the Department Public Works. It is not necessary to refer further to this matter at present; but the Lieutenant-Governor thinks it necessary to observe that in view of the cessation of demand of firewood for engine fuel, and the probable contraction in the demand for sleepers as the various railways in the North-West of India are completed, the financial results of the working of the Forest Department may very probably fall during the next five or ten years considerably below those of the same preceding periods. The reduction of outstandings of revenue is satisfactory. An explanation should be furnished as to why three-fourths of the sum still remaining due is found in the Chamba Division.

8. The Report submitted by the Conservator is a clear and practical one, and the thanks of the Lieutenant-Governor are due to Colonel Bailey and the Officers of the Forest Department for their working during the year under review.

ORDER.—Ordered that the above Remarks be printed and published, as usual, with the Report and in the *Punjab Government Gazette;*

Also that they be forwarded with the Report to the Government of India in the Department of Revenue and Agriculture.

By order of the Hon'ble the Lieut.-Governor,

H. C. FANSHAWE,

Offg. Junior Secretary to Government, Punjab.

Punjab Government Press, Lahore.—31-8-88—382.

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PROGRESS REPORT

OF

FOREST ADMINISTRATION IN THE PUNJAB

FOR THE YEAR 1887-88,

By Lieut.-Colonel F. BAILEY, R E., *Conservator of Forests.*

INTRODUCTION.

Association of Revenue and Forest Officers.

1. The Financial Commissioner issued a revised Circular on the 17th March, clearly defining the responsibility of Revenue Officers in respect of the duties discharged by District Forest Officers.

Additional office work thrown on Forest officers.

2. In conformity with the orders contained in the first paragraph of the last review by the Local Government of Forest Administration in the Punjab, the Conservator submitted a report on the causes of increase in office work entailed on Divisional Officers by the provisions of Financial Commissioner's Circular No. 42 of 1885. In the orders passed on that report, His Honor the Lieutenant-Governor said:—"It appears to be undoubtedly true that there has been a general increase, within recent years, in the work of Forest Officers; but, as remarked in paragraph 3 of the Government of India review on the Forest Report of 1886-87, this increase is mainly due to the enlargement of the sphere of the Forest Officer's duties." After reviewing the effect caused by the issue of the Circular, the Lieutenant-Governor went on to say:—"On the whole, therefore, it does not appear that any very marked increase has been caused in the work of the offices of Forest Officers by the changes brought about by the Financial Commissioner's Circular No. 42 of 1885;" but His Honor added that the subject should continue to receive the Conservator's attention, and that if the burden of office work should prove to be greatly enhanced hereafter under the new system, the necessary representations could be made to afford relief where required.

The Officer in charge of the Rawalpindi Division says that the Financial Commissioner's Circular was rigidly worked up to, and that, consequently, more extra work fell on his office than in 1886-87. Enquiries on this subject will be made.

Transfer of waste lands to Forest Department.

3. The Conservator made a fresh representation to the Financial Commissioner regarding the transfer of the entire area of forest and waste land to the charge of the Forest Department; and it is understood that the matter is now before him in connection with the financial arrangements involved in it. It is believed that, as soon as these questions have been settled, the transfer will be effected in districts where there is a District Forest Officer under the control of the Collector, as provided in Financial Commissioner's Circular No. 11 of the 17th March 1888. The Conservator has reported to Government his belief that the officers of the Controlling staff will be both able and willing to accept the additional work that the contemplated transfer will undoubtedly cast upon them; but that, partly on account of this work, and partly on the grounds mentioned in the previous paragraph, it seems probable that the offices of some of them may require to be strengthened. He is unable at the present time to give any useful idea of the extent to which this may become necessary, nor is he aware whether or not corresponding savings can be effected in the Collectors' offices.

Jagir Forests.

4. The officer in charge of the Kangra Division reports that the Rajahs management of the Jagir forests was supervised, and that their books and registers were examined.

Dates of submission of Divisional reports.

5. The Divisional Officers' reports were received on the following dates, *viz*:—

Montgomery ...	... Mr. Pinder	...	... 28th April
Jhelum ...	... „ Forrest	...	... 1st May
Lahore ...	... „ Reuther	...	... 4th „
Kangra ...	... „ Lemarchand	...	... 5th „
Mooltan ...	... „ Elliott	..	... 6th „
Bashahr ...	... „ Smith	...	... 7th „
Chenab ...	... „ Murray	...	... 8th „
Phillour ...	... „ Down	...	... 11th „
Kulln ...	... „ Carr	...	.. 14th „
Rawalpindi ...	... Messrs. Shakespear and Forrest	...	... 16th „
Chamba ...	... Mr. Reuther	...	... 17th „
Hazara ...	... „ Wild	...	.. 25th to 31st May (in sections)

CHAPTER I.—AREA AND BOUNDARIES.

I.—Area.

Changes during the year

6. No new reserved or protected forests were gazetted during the year. An area of 6,355 acres of forest in Bashahr was transferred from the North-Western Provinces. 82 acres, previously excluded from the Chenab Division as having been made over to the Railway authorities, were again brought on the books of the Department. 24,985 acres were added on re-estimation of area, principally in Bashahr, in connection with Mr. Minniken's demarcation work. 4,482 acres were given out in grants and leases, and 293 acres were lost by river action. The net increase of 26,647 acres is consequently a nominal one. The demarcation work in Bashahr was concluded, the total area embraced in it being 116,687 acres

Village Forests.

7. The question of the Hazara village forests is still unsettled.

Grants and leases.

8. 70 acres were given as a grant from the Changa Manga reserve (Rakh Jalleke), and 3,632 acres were granted from unclassed forests in Lahore. 780 acres of unclassed forests in Montgomery were leased. 50 acres of protected forest in the Rawalpindi district were, under orders by the Commissioner, granted from the Chinám forest in Kahuta; but this area has not been struck off the register.

Chamba

9. The question of reservation of new areas, as well as that of the sale of trees from unreserved forests in Chamba, is still pending; and the reservation of the Kajlota forest, which adjoins Kalotop, remains in abeyance. The schedules of privileges in 7 forests of the Chamba range, and in 5 forests of the Dalhousie range, have not yet been agreed to by the Rajah.

Forest Settlements

10. Final orders have not yet been passed on the settlements of the Sháhpur-Kandi, Kulu, Kála Chitta, Gujrát and Kángra forests. The settlement of rakhs in the Sháhpur district, including the western end of the Salt Range, is about to be commenced.

A Circular, No. 26 of the 8th August, was issued by the Financial Commissioner on the conduct of forest settlements. It appears doubtful how far it is desirable, from a purely forest point of view, to proceed under this Circular, except in cases where no rights or concessions have to be recorded.

Mr. Smith observes that the land settlement in Bashahr promises to give fixity to holdings, and to prevent the promiscuous breaking up of forest land.

Ultimate disposal of plains rakhs.

11. The question what the ultimate disposal of the large extent of rakh lands lying in the plains districts is to be has been under consideration. The proposal to demarcate large areas in Multan, Muzaffargarh, Montgomery, and Gujránwála, to form them into irrigated reserves, and thus to free the surrounding rakhs for the extension of cultivation, was mentioned in the Conservator's last report. The Government of India, in its review of the report, favors the project, but draws attention to the success of plantations in Sailaba lands. The Inspector-General of Forests, in his review of Forest Administration for 1885-86, also suggests the employment of irrigation.

12. The present is not the occasion for a full discussion of this important question; but the Conservator of Forests feels constrained, notwithstanding the views expressed by the high authorities above quoted, to restate the doubt he feels as to the advisability of the Forest Department committing itself to any extensive project of this kind, until the effect the outturn of coal from Dandot will have on the demand for fuel by the Railway Department is more accurately known than it is at present. The expense of constructing irrigation works would, it is feared, be extremely heavy; while the supply of water must, in view of the requirements of agricultural land, be uncertain, and the water-rate high. On the other hand, the market for the produce appears to be by no means secured. Hitherto, the principal part of the outturn from the plains rakhs has been consumed as engine-fuel; but the Railway Department does not require the yield of Changa Manga for the current year, and most of the wood is still unsold. This being so, the disposal of the outturn of plantations situated at Serai Sidhu, Sanáwan, Pákpattan, and on the southern border of the Gujranwála district must, it is thought, be more than doubtful.

13. It appears likely that the only way in which a local market could be secured, would be to scatter the plantations over the districts at comparatively short distances apart, and thus bring the produce as near as possible to the consumers. For even should it be determined to grow building timber as the principal crop, it is feared that the price obtainable for the entire outturn would not be remunerative, unless it were grown near local centres of consumption, and unless the small wood could be regularly sold as fuel. But it seems doubtful whether the native population could be induced to use firewood, which they would have to pay for at rates appearing to them high, and to carry over long distances to their homes. At present it is thought that their requirements in this respect are met by the use of cowdung, and of what they can pick up without payment. In Hoshiarpur, for example, the tenants living in the plains burn nothing, or little else, than cowdung, rather than pay the landlords for wood, of which there is a plentiful supply close to their dwellings.

This objection would apply equally to plantations on Sailaba land; but the capital to be expended on establishing them would be comparatively small.

14. The reservation under Chapter II of the Forest Act of compact are as of Government waste land, with a view to the formation of fuel and fodder reserves in the vicinity of Railway Stations, is under consideration; and the Conservator has discussed, in a preliminary manner, with the Chief Engineer, Irrigation Works, the feasibility of reserving tracts of one or two thousand acres at intervals of 12 miles or of 6 miles along all new canals and *rajbahas*. Some parts at least of such tracts could probably be irrigated without much expense; and the Chief Engineer was understood to say that he did not anticipate any objection to the utilization for them, free of charge, of such *bonâ fide* waste water as might, from time to time, happen to be available. There is no doubt that such reserves would yield a valuable supply of grass, shrubs, and trees; but the Forest Department could not undertake to convert them into irrigated plantations at a heavy cost. Efficient supervision would of course be difficult to provide; but unless the sources of supply are distributed in some such manner as has now been suggested, it is not easy to see how a local market can be hoped for.

It may perhaps not be out of place here to remark that the term "fodder," in connection with fuel and Fodder Reserves, is not always understood to "comprise all edible bushes and trees which in years of drought are likely to be of more value than grass and shallow rooted crops;" this is, however, the meaning stated by the Government of India to be attached to it.

15. To finally decide, at the present time, what areas of rakh land should be permanently protected against the encroachment of new cultivation, is doubtless not an easy task; but it does not appear impossible to frame a tentative scheme for each district, which might guide the giving out of grants and leases for the next ten years or so. Under such a scheme, certain areas would be held as not available for alienation, while others might be given out without restriction so far as the present question is concerned. Unless something of this sort be done, it is feared that when the time arrives at which a final decision can be come to, it may be found that the lands it is most desired to retain for the growth of trees or as grazing grounds are no longer available, or they may be so much cut up by cultivation that their reservation has become impossible. A commencement to separate lands which may be cultivated from those which should be permanently retained as forest and waste has recently been made in the case of Lahore district, regarding which a preliminary report has been submitted to the Financial Commissioner, in connection with his proposal to take up a large area for the extension of cultivation.

16. A difficulty which must be faced, in connection with the surrender of any considerable areas of existing forest and waste, is that of the number of cattle, in excess of the requirements of cultivation, now kept by the people. The Deputy Commissioner of Lahore, writing of Rakh Bengali, says—"A very large area has been given away in grants and turned from grazing to cultivation. There is not at present grazing for the cattle maintained by the surrounding villages, and the people must inevitably dispose of a number of their cattle. They are only maintained now by illicit grazing."

The Deputy Commissioner of Mooltan says that "the area for grazing has much decreased" and that "the cattle henceforth must graze on their own village lands."

The position in Montgomery is somewhat similar; but here there is understood to be a large stretch of country which cannot be irrigated, and, as Mr. Diack says, "a numerically important section of the inhabitants will, in all probability, continue for many generations to live by cattle breeding."

It appears evident that all the cattle now owned by the people, together with those of future settlers, cannot, as cultivation advances, be thrown on to the remaining area of rakh and waste land; not only would they fail to find sustenance there, but the result would be that, while they would inevitably die from starvation, the rakhs would be destroyed, as sources of fuel and fodder, beyond chance of recovery. Doubtless this will not be permitted to occur. As cultivation extends, the people must obviously cease to keep the large numbers of cattle they at present possess; and it appears important that this should be fully recognized while the transition period is still in its infancy.

2.—Boundaries.

Demarcation.

17. The whole of the reserved and protected forests are demarcated. Of the unclassed forests, 1,355 square miles are demarcated, and 1,848 square miles are not so. The areas in square miles of the undemarcated forests are as follows:—*viz*. Rawalpindi 244, Kangra 541, Bashahr 76, Jhelum 211, Chenab 26, Multan 10, Montgomery 740. It is, however, reported that, in many localities, the number of boundary marks is considered insufficient, and that either additional pillars ought to be erected, or lines should be cleared from pillar to pillar. The marks, in some cases, are not of a sufficiently permanent kind, and they should be replaced by others of a better class. Orders will be given to undertake this work by degrees, as funds can be made available. The numbering of all boundary marks will, where this has not already been done, be completed as early as possible.

Disputed boundaries.

18. The disputed boundary between the Soldah reserve in Kangra and the Chamba State is still unsettled.

Boundary marks for sandy tracts.

19. Mr. Elliott says :—" In sandy tracts, subject to river action, I have made with success mounds about 5 feet in diameter and 4 feet in height, protected by tamarisk wattling formed on stakes driven deep into the ground, a long pole being planted in the centre of the mound. This is cheap and lasts in water better than an ordinary sized masonry pillar."

Work done during the year.

20. The statement in Appendix (A) gives the amount of boundary work done during the year. It shows that 234 miles of boundary were newly demarcated, and 385 miles cleared. 18 chains of dry stone walling were erected, 96 miles of trenches were dug; 3,037 pillars were erected and 5,550 were repaired. The total expenditure on demarcation has been Rs. 7,315.

CHAPTER II.—SURVEYS, WORKING PLANS AND ANNUAL PLANS OF OPERATIONS.

1.—Surveys.

Work done during the year

21. In *Hazara*, the preparation of copies of the vernacular Settlement maps was completed, and they were distributed to Rangers. The receipt of the new maps of Murree and Kahuta, *Rawalpindi* district, from the Surveyor-General's Office is awaited. In the *Chamba* Division, the survey of the Shahpur Kandi tract was commenced by Colonel Tanner's party of the Imperial Survey Department. In *Kangra*, sketch maps were prepared of the 94 blocks which are proposed as protected forests under Mr. Anderson's settlement. In *Kulu*, Colonel Tanner's survey of the forests, on the scale of 4"=1 mile, made good progress. In *Bashahr*, the work of the Forest Survey Department was continued. In *Jhelum*, two sets of copies of Mr. D'Arcy's maps of the reserves were made; one set was distributed to Rangers, and the other made over to the Deputy Commissioner. In *Lahore*, a contoured map of the Changa Manga plantation was prepared, in connection with the project for improving the irrigation channels.

2.—Working Plans.

Plans sanctioned

22. The two working plans for the Chamba Division, and that for Changa Manga, were sanctioned by Government. The areas for which plans have been prepared are shown in Appendix (B). Those for Chamba, Changa Manga, Bhera, Khánpur and Shahdara, relating to an area of 2,45,120 acres, are finally sanctioned. The plans for Kalesar, and for Murree and Kahuta, which provide for the management of 1,26,721 acres, are still under examination, but are worked up to as far as possible.

Special Working Plans Branch

23. The special Branch, under Mr. Pigot, completed the working plan for Murree and Kahuta, which is now in the hands of the Financial Commissioner. When Mr. Pigot took leave on the 13th July, the special Branch temporarily ceased to exist, owing to paucity of officers. The expenditure incurred up to the above named date, including all charges, was Rs. 3,827. The temporary suspension or work by the special Branch is much to be regretted, as there is a great deal to be done in this direction, working plans being urgently needed for the Hazara, Division, for the forests from which the fuel supply of Rwalpindi is derived for Kulu, and for Bashahr.

Plans prepared by local officers.

24. Mr. L. G. Smith, continued the preparation of the Pángi plan. Mr. McIntire submitted a report on the revision of the Kalesar plan, and he also made some progress with that for Kotgarh and Kotkhai. Mr. McDonell sent in a report on the Dalhousie Cantonment forests.

Changa Manga.

25. The effect which the working of the Daudot Coal Mines will ultimately have on the consumption of firewood as engine-fuel is as yet unknown. But the Railway authorities have informed the Conservator that the outturn of Changa Manga for 1888-89 is not required; and it has become evident that some modification of the working plan must be made, in order to meet the reduction which has occurred in the demand, and which seems likely to be maintained. The Conservator of Forests has been in communication with the Inspector-General of Forests on this subject, and has submitted copies of the correspondence for the orders of Government. He has also reported to Government on the proposal to improve the irrigation channels of the plantation at an estimated cost of Rs. 85,000.

Result of operations compared with the provisions of the plans.

26. *Khánpur (Hazára Division).*—The following statement shows the cuttings provided for, and those that have actually been made :—

	Previous to 1887.		During 1887.		Total to end 1887-88.	
	Acres.	Maunds.	Acres.	Maunds.	Acres.	Maunds.
Cuttings provided for ...	8,884	3,13,850	1,514	33,500	10,398	3,47,350
Actual clearances ..	5,186	1,74,785	1,203	52,278	6,389	2,27,063
Differences ...	—3,698	—1,39,065	—311	+18,778	—4,009	—1,20,287

The provisions of the plan have been fairly well observed during the last three years. The period it provides for will expire during the current year; but owing to causes previously explained, the remaining stock will suffice for from three to four additional years' fellings.

Chamba.—The prescriptions of the working plans were adhered to as regards felling and planting, but other works were curtailed owing to want of funds.

Phera (Chenab Division).—The full quantity (three lakhs) of firewood, was supplied to the Railway; but as the total yield of rakhs Bhullowál, Pakhowál and Rukkan, was found to fall short of the estimated quantity by 2,14,500 cubic feet (stacked), this amount had to be taken from Khán Mahomadwála.

Changa Manga (Lahore Division).—In consequence of the reduction which occurred in the demand for engine-fuel, fellings were restricted to seven compartments, agregating 369 acres, instead of extending over 13 compartments measuring 701 acres. The outturn was 6,71,042 cubic feet instead of 9,84,800 cubic feet (stacked), as provided by the plan. A considerable part of the felled wood remained on hand at the close of the year.

Shahdara (*Lahore Division*).—The prescriptions of the plan were fully carried out.

Control books.

27. Control books have been maintained for forests for which working plans have been prepared. For other forests, they have been kept up in the Rawalpindi, Kángra, Basháhr, Chenáb and Phillour Divisions; and they are under preparation in Hazára. The officers in charge of the Kulu, Jhelum, Lahore, Mooltan and Montgomery Divisions have not reported on this subject.

3.—Annual plans of operations.

Deviations from the plans.

28. The usual plans of operation were prepared for each division, and work was regulated, as far as possible, in accordance with them. Want of funds necessitated some departure from their provisions, especially in Chamba, Kulu and Lahore. Each Divisional Report contains a full account of the principal items of deviation, with the causes thereof; and the Conservator has satisfied himself that the plans were adhered to, so far as circumstances permitted their prescriptions to be carried out.

CHAPTER III.—PROTECTION AND IMPROVEMENT.

1.—Establishment.

Conservator

29. Mr. A. E. Wild, Deputy Conservator of Forests, 2nd grade, officiated as Conservator from August to October, during the time that Lieutenant-Colonel F. Bailey officiated as Inspector-General of Forests.

Changes in the holding of Divisional charges.

30. Whilst Mr. Wild acted as Conservator, Mr. Reuther held the Hazara Division, and Mr. Carr took over the Lahore Division, in addition to his duties as Personal Assistant to the Conservator. During Mr. Down's absence on three months' privilege leave, Mr. Lemarchand held charge of the Kulu in addition to the Kangra Division. Mr. Carr handed over his duties at head-quarters to Mr. Pigot on the 20th January, and assumed charge of the Kulu Division, Mr. Down about the same time relieving Mr. McIntire of the Phillour Division. Mr. Elliott held the Montgomery in addition to the Mooltan Division, during Mr. Pinder's absence on two months' privilege leave. Mr. C F. Rossiter, Sub-Assistant Conservator, held charge of the Jhelum Division, during the absence of Mr. Forrest on three months privilege leave.

Controlling staff

31. The officers of the controlling staff have continued to carry out their increasingly arduous duties in a satisfactory manner, and are always ready to respond with alacrity to the numerous calls made upon them. Lieutenant-Colonel Stenhouse reverted to military duty. The Department is short-handed. It is true that the number of charges has been added to during the last few years, by the formation of the Montgomery and Working Plans Divisions, but the natural development of forest business calls for an increased staff. It is thought that when the present numbers were fixed, sufficient allowance may not have been made for officers on leave, and for juniors not qualified to take a controlling charge.

Executive staff

32. Sub-Assistant Conservators Mr C. F. Rossiter and Babu Ladha Singh are reported to have done excellent work. Sub-Assistant Conservator Fazal-uddin has also rendered good service. The names of eight rangers have been brought to the notice of the Conservator by Divisional Officers. Ranger Daulat Ram has been lent to the Jodhpur Darbar. The proposals for the amalgamation of Forest and Rakh establishments, which included an improvement of the position of the Executive staff, have been returned to the Conservator by the Financial Commissioner, as he was unable to deal with them in the form in which they had been submitted to him. Consequently the improvements which had been hoped for have not yet been effected.

Protective staff

33. The Foresters and Guards have, generally speaking, done good service, though several men of the latter class had to be dismissed. Three Native Non-Commissioned Officers hold Foresterships. Duffadar Sundar Singh is reported not to have shown much improvement. Naik Jaimal Singh has behaved "fairly well": of Lance-Duffadar Natha Singh, it is said that he has maintained his previous good character for diligence and efficiency.

Office Establishment.

34. The office establishment has worked well, and has continued to cope with the increasing work of the Department.

2.—General protection and breaches of Forest Law.

Forest Offences.

35. The following statement gives the classification of forest offences during the year :—

	Number		Increase.	Decrease.
	1886-87.	1887-88	In 1887-88.	
1. Injury to the forests by fire	68	173	105	...
2. Unauthorized felling or appropriation of wood and other minor produce.	659	601	...	58
3. Grazing without permission	358	605	247	...
4. Other offences ...	214	108	...	106
Total ...	1,299	1,487	352	164

The net increase is 188 as compared with the figures of last year. The numbers of offences in Hazara and Kangra were reduced by 14 and 37 respectively; while, on the other hand, there were increases of 31 in Kulu, 59 in Bashahr, and of 112 and 58 in the Chenab and Mooltan Divisions respectively.

Under the head of "other offences" are included the following, *viz.* :—

Illicit cultivation (chiefly in Bashahr)	59
Boundary case	1
Offences against River rules	26
Miscellaneous	22
Total ...	108

Explanations by Divisions

36. In *Hazara*, the decrease is attributed partly to the fact that petty offences were disposed of by the confiscation of the implements used in committing them, instead of by bringing the offenders before the Courts, and partly to the people having become more accustomed to the restrictions imposed. The decrease in *Kangra* is said to have been due to more efficient supervision, and to the better understanding of the rules by the people. In *Kulu*, the increase in the number of cases was due to the large number of fires which occurred in consequence of the exceptional drought. A number of persons were summoned under the Rules of 1885, against whom convictions could not be obtained. In *Bashahr*, the increased number of cases is ascribed to the greater vigilance of the establishment. Forest offences are dealt with more promptly than heretofore by the Rampur Darbar. In the *Chenab* Division, the greatest increase occurred in the Phalian Tahsil of the Gujrat District. The Divisional Officer attributes this to the lightness of the punishments previously inflicted; but he says that offences are now less frequent. In *Mooltan*, the increase is said to have been due to improved supervision under Forest Ranger Hira Singh.

Convictions.

37. 1,462 cases were actually disposed of, and convictions were obtained in 976 cases, or in 67 per cent. of them, as compared with 81 per cent. during the previous year. If the figures for Bashahr, Gujrat and Montgomery be omitted, the percentage for the year under report rises to 77 per cent. As regards *Bashahr*, the proportion of acquittals is very heavy; but the Divisional Officer explains that a number of offenders were discharged with a warning, because the inconvenience they had been put to in attending court was deemed a sufficient punishment for them. Such cases should apparently have been recorded as convictions with a nominal punishment. The officers in charge of the *Chenab* and *Montgomery* Divisions have not offered any explanation of the high percentages of acquittals which occurred in the Gujrat and Montgomery Districts.

Offences compounded under section 67 of the Forest Act.

38. The number of offences compounded under the Forest Act is shown below :—

Division.	1886-87	1887-88				Average per case.
	No. of offences.	No. of offences.	Amount for which compounded.			
			Rs.	A.	P.	
Rawalpindi ...	4	24	72	3	6	Rs. 3
Bashahr ...	...	1	10	0	0	„ 1-0
Jhelum ...	305	307	872	10	6	„ 2-13
Lahore ...	5	...	...	...	...	„ 2-15
Mooltan ...	...	3	8	12	0	
Montgomery ...	2	...	...	...	...	
Total ...	316	335	963	10	0	4-12

Cattle trespass.

39. The number of cattle impounded is shown in Appendix (C). The total increase in the number of animals is 4,138, There was an increase of 2,329 in *Rawalpindi*, principally due to the enforcement of the new rules against goat and sheep grazing in Murree and Kahúta. There was also an increase of 672 in *Lahore*, and of 902 in *Montgomery*, chiefly in the Gugera Tehsil, where, owing to deficient rainfalls, the grass supply ran short.

3.—Forest Fires.

General Remarks.

40.—Form No. 51 and the two following statements show the results of conservancy measures, and the total area burnt and unburnt during the year :—

Abstract showing areas (in acres) burnt and unburnt.

	Reserve.	Protected forests.	Unclassed state forests.	Total.	Grand total.	Percentage of entire area.
Areas of which the protection was attempted, but which were burnt. (Form No. 51) ...	1,519	3	2,391	3,913	...	0·12
Other areas burnt ...	702	63	5,646	6,411	...	0·19
Total area burnt ...	2,221	66	8,037	10,324	10,324	0·31
Areas successfully protected. (Form No. 51) ...	1,68,141	24,010	70,044	2,62,195	...	7·83
Other areas which escaped burning ...	8,11,733	2,99,037	19,71506	30,82,376	...	91·86
Total area unburnt...	9,79,874	3,23,047	20,41,650	33,44,571	33,44,571	99·69
Grand total area of forests of all classes (Form No. 49) ...	9,82,095	3,23,113	20,49,687	...	33,54,895	100

Number of fires and areas burnt in each Division.

Divisions.	Number of fires.		Area burnt (acres).	
	1886-87.	1887-88.	1886-87.	1887-88.
Hazára ...	103	15	27,651	253
Ráwalpindi ..	59	13	49,841	289
Chamba ...	16	11	523	15
Kangra ...	25	5	1,543	284
Kulu ...	92	32	40,407	3,709
Bashábr ...	7	21	640	1,331
Jhelum ...	3	...	9	...
Chenab ...	7	...	133	...
Lahore ...	27	15	1,125	1,260
Mooltan ...	29	10	2,617	2,349
Montgomery ...	...	3	...	77
Phillour ...	20	7	9,403	757
Kotgarh and Kot Khai ...	4	...	936	...
Total ...	392	132	1,34,828	10,324

It is seen that the area to which special protection was extended rose from 239,453 to 266,108 acres. Of this area, only 3,913 acres, or 1½ per cent., were burnt. The entire area over which fire passed, including that regarding which no special precautions were adopted, amounted to 10,324 acres, or 0·31 per cent. of the entire area under charge of the Department. The work of the year may therefore be considered to have been very successful.

The areas burnt in *Hazára*, *Ráwalpindi*, *Chamba*, *Kángra* and *Montgomery*, ranged from 15 acres in Chamba to 289 acres in Rawalpindi. There were no fires in *Jhelum* and *Chenab*. The largest conflagrations occurred in *Kulu*, where an area of 3,709 acres was burnt. The damage done is reported to have been comparatively small. In *Báshábr*, fire passed over 1,331 acres. Mr. Minniken deserves much credit for the manner in which he has succeeded in controlling the burning of waste lands and pastures by the hillmen. 1,260 acres were burnt in *Lahore*, but the damage done was not great. In *Mooltan*, fire passed, over an area of 2,349 acres; a very destructive conflagration occurred in the Doman forest, Rajanpur, where 1,500 acres were burnt. In *Phillour*, 757 acres, including 750 acres in Kalesar, were burnt. It is reported that the damage done is not severe.

Previous years fire near Murree.

41. At the time the annual report for 1886-87 was submitted, a full account of the disastrous fire which occurred during May 1887 in the neighbourhood of Murree, had not been received. Mr. Shakespear has since reported on the subject. It appears that of 42 forests situated in the Murree and Kahuta ranges, and aggregating 53,945 acres, no less than 43,402 acres were burnt. The damage done was very heavy; generally speaking all young seedlings were completely destroyed; and it is estimated that 20 per cent. and 10 per cent. respectively of the stock of saplings and poles were either entirely killed, or rendered incapable of yielding building timber. The larger trees were much scorched and damaged. The fire which raged over these forests between the 13th and the 18th May, is believed to have been ignited by sparks blown across the Jhelum from Kashmir territory.

Mr. Shakespear writes :—

"Everything on the ground being like tinder from the excessive drought, it was difficult to make any way against the conflagration, and no number of fire lines would have sufficed. To this, any one out in the middle of this huge and appalling fire would have testified."

He reports that, on the whole, the people rendered praiseworthy assistance in extinguishing the flames; but he fears that the inhabitants of certain villages promoted their spread. This, however, cannot be proved The forest officer was on the spot throughout the continuance of the fire; the Assistant Commissioner sent out the Tahsildar and some police, and himself visited the scene of the disaster. It is understood that a report on the subject has been submitted to Government by the Commissioner of Rawalpindi.

4.—Grazing and Fencing.

General Statement.

42. The following statement shows the areas in square miles closed during the year, as compared with those closed during 1886-87 :—

Division.	*Closed to all animals.*				*Closed to camels Sheep and goats only.*				*Closed to other animals only.*				Remarks.
	Throughout the year.		Part of the year.		Throughout the year.		Part of the year.		Throughout the year.		Part of the year.		
	1886-87.	1887-88.	1886-87.	1887-88.	1886-87.	1887-88.	1886-87.	1887-88.	1886-87.	1887-88.	1886-87.	1887-88.	
Hazára ...	169	168	...	1	...	...	...	...	...	...	...		
Ráwalpindi ...	61	126	18	48	99	34	...	39	...	3(*a*)	...		(*a*) Closed to camels only.
Chamba ...	61	61	...	...	...	...	...	...	...	...	...		
Kángra ...	55	54	6	6	...	1	...		...	...	...		
Kulu ...	3	29	...	1	...	4	...	(*c*)9	...	12.*b*)	...		(*b*) closed to kine.
Bashàhr ...	33	114	...	...	...	...	...	...	...	40(*d*)	...		(*c*) is included in (*b*)
Jhelum ...	29	169	...	...	46	8	...	...	...	...	...		
Chenab ...	37	41	84	94	137	119	...	...	...	...	...		
Lahore ...	70	72	37	48	80	76	...	...	...	...	...		(*d*) closed to buffaloes only.
Mooltan ...	83	70	105	74	29	73	...	...	...	...	...		
Montgomery ...	52	60	36	27	15	27	...		...	...	...		
Phillour ...	20	7	...	14(*e*)	1	...	...	*f*)14	...	...	...		(*e*) and (*f*) are the same area, which is closed for a part of the year to all animals, and for the remainder of the year to camels sheep and goats only.
Total ...	673	971	286	313	407	342	...	62	...	55	...	...	

It is regretted that the figures for last year were incorrect, owing chiefly to the inclusion, among the areas closed against camels, goats and sheep, of those shown in the other columns of the statement given at page 14 of the report. The areas for 1886-87 have now been corrected ; and it is seen that the following changes have actually taken place during the year under report. The area totally closed to all animals has increased by 298 square miles, and that closed to all animals for a part of the year only has increased by 27 square miles. There is a decrease of 65 square miles in the area closed throughout the year to browsers, and an increase of 62 square miles to that closed against this class of animals for a part of the year. 55 square miles were closed throughout the year against specified animals.

Chenab, Lahore, Mooltan, and Montgomery Divisions.

43. A special report has been called for by Government with reference to the closures on bár lands in the Chenáb, Lahore, Mooltan and Montgomery Divisions, and this will shortly be submitted. The figures for 1887-88 do not differ very widely from those of the previous year. They show an increase in closures of all classes, amounting to 9 square miles in Mooltan, and 11 square miles in Montgomery, there being a decrease of 4 square miles in the Chenab Division. The areas closed in these four divisions, however, by no means all fall under the definition of "bár lands;" probably not more than three-fourths of them can be so classed. The question of natural reproduction in such lands will be dealt with in the next section of this report.

Other Divisions.

44. The areas closed in *Hazára*, *Chamba*, *Kángra* and *Phillour* are unchanged.

In the *Ráwalpindi* District, total or partial closures have extended over an additional area of 43 square miles, consequent on the recent settlement operations ; and 39 square miles of Protected Forest were closed for a part of the year, in consequence of the large fire which occurred in Murree and Kahúta during May 1887. In *Kulu*, permission having been obtained to anticipate to this extent the expected orders of Government on Mr. Anderson's settlement, closure, total or partial, was carried out over an additional area of 43 square miles, chiefly in Waziri Rupi. In *Bashàhr*, the area absolutely closed has been increased by 81 square miles, and an additional area of 40 square miles has been closed against buffaloes only.

This is in consequence of the demarcation and settlement recently effected by Mr. Minniken. In *Jhelum*, the new closures consist of 102 square miles of rakhs in the Salt Range, from which cattle have been wholly or partially excluded, with a view to improve the vegetation now scantily clothing the hills. This will afford the resident population a more certain supply of forest produce, and at the same time regulate the flow of storm water on to the alluvial tracts below. In all cases the closures have been effected under sanction of the prescribed Revenue Authority.

General remarks on closure

45. It appears natural that attempts to close areas of forest and waste over which flocks and herds have been accustomed to wander, should meet with opposition, and cause, at first at any rate, some discontent ; but no closures can, in the Punjab, be effected without full consideration of the requirements of the people in the matter of grazing, and without the consent of the Revenue Officers. It is, of course, possible that, in a small proportion of cases, the shutting up of parts of the forests may cause real inconvenience ; but the Conservator feels sure that, in far the greater number of instances, any dissatisfaction caused by these measures will gradually subside, as the people become more habituated to the restrictions necessarily imposed on them. The total area wholly or partially closed during 1887-88 amounted to 1,720 square miles, or slightly over one-third of the total area of forests of all classes administered by the Forest Department ; and the proportion to the total area of Government forest and waste land, available to the people in addition to their own grazing grounds, is, of course, very much smaller. In *Lahore*, the closures of all classes do not, it is thought, extend over more than one-half of the total area of Government forest and waste. In *Montgomery*, the Forest Department property lies wholly in the Montgomery and Gugaira Tehsils. The total area under its charge amounts to 847 square miles, of which, during the year under report, 60 square miles were entirely closed; 27 square miles being closed for a part of the year only, and a similar area being closed to browsers, but open to kine. The closures of all kinds extended over 114 square miles, or a little over 13 per cent. only of the area in the hands of the Department, and probably not more than 6 per cent. or 7 per cent. of the total area of Government forest and waste land in the two Tehsils. A glance at the map shows, that in the *Mooltan* District, the proportion of closed forest is insignificant. But in some parts of the Province the number of cattle kept by the people, over and above their requirements as agriculturists, prevents the temporary closure of areas after felling, and their regeneration is thereby seriously endangered. Yet the people must, if they are to turn from a chiefly pastoral to an agricultural life, ultimately get rid of their surplus cattle ; and it would be a misfortune if, during the period of change, valuable rakh lands should be irretrievably destroyed. It is inevitable that such rights as the people may possess, or such concessions, as the Government may feel disposed to accord to them, must be interfered with when parts of their grazing grounds are given away in grants to settlers ; and it is not apparent why it should be more difficult to deal with the grazing question, when it is desired to temporarily close a forest area for regeneration, than when the area is to be permanently removed from the use of the present population by being granted away to strangers

The Conservator of Forests has understood from a late Deputy Commissioner of Montgomery, that when the closed areas were opened in 1886, in consequence of the distress then prevailing, the fodder was consumed within a few days by starving cattle from all parts of the District, and the serious damage done by them was not counterbalanced by the saving of their lives. It is suggested that, in such cases of emergency, more animals should not be admitted than food can be found for. The necessity under which the lopping of olive trees in the Khushâb Tehsil of the Salt Range was permitted until the month of June, is to be regretted.

Cutting and removal of grass

46. Endeavours have been made to extend the practice of cutting and carrying grass from the closed areas for consumption outside them. This system, which is successfully pursued in some districts, has the great advantage that, at any rate the greater part of the crop of grass is utilized, while protection of the young tree-growth is not interfered with. If it could be more generally introduced, it is thought that opposition to the necessary closure of forest and waste land for purposes of

regeneration might be appreciably lessened. The realizations on cut grass amounted in Jhelum to Rs. 3,165, and in Lahore to Rs. 3,153. The people are taking kindly to the system in the Serai Sidhu Tehsil of Mooltan, and some progress has been made in this direction in the Chenab Division. Much credit is due to Messrs. Elliott, Forrest, Reuther and Murray for the manner in which they have promoted sales of cut grass. The facts above stated should not be lost sight of when the extent to which closure against flocks and herds has been carried out is under consideration

During his recent tour in the Salt Range, the Conservator noticed several tracts of village common-land, on which the grass is kept standing until required for use, when it is cut and removed by the villagers ; and the grass preservers in the hills near Simla and elsewhere, are well known Some grass, cut departmentally and stacked under Mr. Forrest's orders, is said to have turned out to be unsaleable, because the people had themselves stored a supply of hay for their own use.

Growth of fodder plants

47. The Conservator has had under consideration the question, whether it might not be possible to reduce the area of forest land required for grazing purposes, particularly in the hills, if a portion of each forest burdened with rights of pasture were set aside for the exclusive growth of the shrubs and herbs on which the animals browse or graze At present these plants are found scattered over the entire forest, and, consequently, a much larger area has to be opened than would be needed if a full crop of them were grown on a portion of ground devoted solely to their production. Application has been made to Government, with a view to the utilization in this connection of the services of Doctor Watt, C.I.E., now attached to the Revenue and Agricultural Department of the Government of India.

Fencing.

48. A good deal has been done towards the fencing of closed forests, particularly in Bashahr and Chamba. To fence any considerable proportion of such areas is not possible, owing to the heavy expenditure that would be involved. But it is thought that something more than has hitherto been attempted in this direction might be accomplished, were the efforts of the Department confined to those points on the boundary where the forests are more than usually open to the inroads of flocks and herds. A small fence is of great service in enabling herdsmen to keep their charges from straying into forbidden pastures ; and much opposition to closure might be met if the enforcement of the order were accompanied by the erection of a piece of fencing, which would render the exclusion of wandering cattle a comparatively easy task.

5. Natural reproduction.

Extracts from divisional reports.

49. *Hazara.*—As regards the silver fir forests, Mr. Wild remarks as follows :—

"In these forests, reproduction appears to be the most behind hand, and the most difficult of recognition. There are places, however, where, after a careful search, a good many small seedlings may be seen, and the absence of saplings and poles makes it difficult to understand what becomes of this advance-growth. In order to solve this problem, the present condition of two or three small areas on which seedlings of this species were plentiful, has been carefully recorded, and their development will be watched. The silver fir is undoubtedly a shade-loving species, and perhaps the requisite amount of cover does not now exist in the more worked out forests ; but, curious to say, observation so far tends to show, that it is in the open blank spots that young seedlings seem to spring up more profusely, rather than in the darker canopied forest. This point requires more elucidation and study".

Of the blue pine forests, he says, that natural reproduction in them is very promising, and in places is all that could possibly be desired. "Indeed, given a blank or cleared area, with a few old seed-bearing trees and, generally speaking, it is merely a matter of time for the area to become fully clothed with blue pine." The progress of natural reproduction of deodar in Khagan is said to be satisfactory. Mr. Wild remarks that after fire has passed through the chil forests, the ground becomes carpeted with young seedlings. Experience gained elsewhere shows that this result might be expected ; but it forms, of course, no argument against the protection of such forests from the fires which almost annually pass through them, for the seedlings cannot grow up unless they can be saved from burning.

Rawalpindi.

50. The report, which is incomplete, shows that progress is not satisfactory.

Chamba. 51. Mr. McDonell says:—

"Provided fires are kept out of the Chamba forests, natural reproduction will progress quite satisfactorily; the grazing is hardly anywhere excessive, that is to say, either the number of cattle is so small that reproduction succeeds in spite of it, or the nature of the ground is such that grazing cannot go on."

He attributes the recent development of natural reproduction in forests where grazing has not been interfered with, to the suppression of the fires by which they were formerly devastated. He says:—

"There is a large extent of chil forest below Kalatop, on the north side, above and below the level road. I was amazed to see the natural reproduction; it is perhaps the finest to be seen any where in the State, and is simply the result of the cessation of fires, accompanied by very little grazing."

He remarks that deodar will not grow in damp shady places, and that, in such localities, other species should be cut or girdled so as to let in the sunlight and permit a free circulation of air.

Kangra. 52. Mr. Lemarchand says:—

"The year under report was an exceptionally good one for chil seed, and the natural reproduction in closed areas is excellent in all the chil forests, both in the Kángra and Hoshiarpur districts. Fire and grazing are the only obstacles in the way of securing easy reproduction in all such forests. The Hamirpur chil forests, 27 square miles, do not show such good results because they are open to grazing throughout the year."

He adds that during the Forest settlement of 1875, the absence of young seedlings in the Tiri chil reserve (then an open forest), was particularly noticed; that it was then closed, and has remained protected against grazing to the present day. It is now, in common with many other such forests, thickly covered with young chil saplings.

The natural reproduction of sâl in Lohára, Hoshiarpur District, and of the other species which compose the mixed crop of other reserves, is said to be all that can be desired where grazing is excluded; but the open areas, except in secluded ravines and in places at long distances from hamlets, do not show such good results. In 1·72, almost all the bamboo (*Dendrocalamus strictus*) clumps in the open portion of the Tallokpur forests, Hamirpur, flowered simultaneously, and died down. The seed germinated freely in the rains, and the forest is now well stocked with bamboos large enough for export.

Kulu. 53. Mr. Carr reports as follows:—

"Natural reproduction of deodar in the few areas where selection fellings have been judiciously made is very good. Blue pine is almost a weed here, and is reproduced well wherever there are parent trees to shed seed, forming dense thickets of young trees when protected from grazing, and where fires have not recently passed through them. Chil, too, comes up well on the hot dry slopes of the lower valleys, where there are parent trees at hand to shed seed."

Mr. Carr goes on to say:—

"In pure forests of blue pine or chil, or in mixed forests of blue pine, rai, and tôs, where undue demands have been made by the people on their capability, reproduction is not good; nor can it be so, for the ground is so much uncovered that the soil is burnt up, and the few remaining trees are too young to furnish good seed. With such forests it is merely a question of time; they must, sooner or later, disappear, or must at least cease to be good timber producing tracts. In the mixed forests of deodar and other pines, the extraction of the inferior pines in a great measure favors the natural reproduction of deodar. I think there is no cause to fear for the areas proposed as reserves, where grazing is entirely excluded; for, with a good seed year and favorable conditions of light, reproduction will be certain."

Bashahr 54. Mr. Smith says of the forests of the Chini Range, that, when marching through them, he noticed that "wherever grazing was slight or absent, the crop of young seedlings was, considering the climate and nature of the forests, satisfactory."

Reproduction is regarded to be, generally speaking, evenly distributed in the forests of the Taranda and Kilba Ranges, where Government fellings took place.

Jhelam 55. Mr. Forrest writes:—

"Natural reproduction of phulai and olive in the Salt Range forests in not satisfactory. The areas felled in 1879-80 for railway purposes have not produced any young growth. The trees cut were probably too old to coppice, and the stools had not sufficient strength to throw out shoots; besides which, the areas had been overgrazed for years previously. Moreover, the phulai has, except in a few places, entirely failed to give seed during the last three years closure has, however, had the good effect of producing a good crop of grass; and this has in every case been of the greatest benefit to the people in the neighbourhood, who were allowed to cut and remove it on payment of a small fee."

Chenab.

56. Mr. Murray reports as follows:—

"There is a complete absence of reproduction from seed in the bar rakhs in all the Districts comprised in this Division. Even the five-acre sample plots, which have been closed for the past four years, contain no fresh tree growth of any kind. The strict exclusion of cattle from the portion of Bela Gillan which was felled over in 1885-86 has this year been insisted upon; and this has resulted in a dense growth of sissoo, kikar and mulberry seedlings. The stools did not coppice owing to the advanced age of the trees. As regards the bar rakhs, the jhand—coppice in Reserve Tibbi Tarar, Phalian Range, has, owing to the strict exclusion of cattle, made better progress this year."

Lahore.

57. Mr. Reuther writes:—

"The two fenced plots in compartment (66) of the Changa Manga reserve (5 and 10 acres respectively), closed several years ago for observation of natural reproduction of seedlings, show no traces of improvement, beyond an increase in the grass crop. Natural seedlings are wholly absent, and the same may be said generally in respect of all rakh-lands in the Lahore District. Reproduction by coppice shoots and root suckers is, however, abundant in all rakhs cut during 1886-87 and previous years, and is amply sufficient for the complete regeneration of the growth. Where the felling has been done during the winter months, and the operation carefully performed, and where cattle have been excluded immediately afterwards, as has usually been done, the coppice and root shoots attain an average height of 2 to 3 feet in the first seasons growth."

Regarding the failure of coppice at Changa Manga Mr Reuther adds:—

"In the compartments cut in the Changa Manga and Shahdara Reserves during 1887-88, and previous years, the reproduction by coppice-shoots and root-suckers is on the whole, very prefect. But in some parts of the Changa Manga plantation, particularly in portions of compartments 6 and 7 and 9 to 12, the coppice-shoots, over considerable but compact areas, wither year by year. Fresh shoots always appear after the first watering, about the end of April or beginning of May. I am more than ever convinced that this periodical failure of the coppice growth is due to the insufficiency, and frequent and long continued interruptions of the irrigation. The soil in these parts is not only very poor in quality; but its hygroscopic properties are very unfavourable: these defects could doubtless be overcome by more frequent and more abundant irrigation. Hitherto it has been impossible to supply more water to these areas without jeopardising the growth in other compartments; but as soon as the existing irrigation system has been improved, in accordance with the scheme now under consideration in consultation with the canal Officers, it will, no doubt, be found feasible to give a more abundant, as well as more regular supply of water to these poorly favored localities, and thereby to promote a vigorous growth of coppice—shoots, capable of thoroughly maintaining themselves."

Mooltan.

58. Mr. Elliott has reported thus:—

"In the five-acre experimental plots, no seedlings have been observed anywhere, but the appearance of the plots is improved, owing to strict closure. Grass has grown, but it seems to be conclusively proved that seedlings will not grow without water. However, the selection of the original plots was not always judicious, there being a lack of seed-trees; better plots will be chosen and fenced for future observation. It may be said that in all the forests in this Division, *jhand* reproduction is good from root-suckers; the stools undoubtedly throw out shoots, but the root shoots are always more vigorous, and grow up at some distance from the parent stump, and in all directions. The *farash* coppices freely from the stool, and rarely dies out, even in cases of old hollow trees, which are little but rings of bark. The *Bán*, *Populus Euphratica*, also coppices freely, both from stools and roots. In all three cases it happens that when the stools are on locally high ground, they are apt to die out in considerable numbers."

"Experiments are being made to note in how many years a *farash* coppice enters the pole stage; also to note the effect of cutting back *jhand* bushes which have been grazed for long periods, and of wounding *jhand* roots to produce suckers; to note the reproduction by root suckers, and by stool shoots; and the age and size below which coppicing does not take place."

"In compartments 2, 3, 4, 5, 8. 9 and 10 of reserve Bura Kotla, the Ravi flood water has enabled some self-sown seedlings to come up. Reproduction by root suckers is very good in Akil and Bura Kotla, lately cut out by Mela Ram. In Shujadpur, the Government cuttings, made after the fire, have been followed by successful reproduction. A small area burnt in Obaorah threw up a scanty new growth; but the old trees were not cut out, and cattle got at the young shoots, so that they have suffered greatly. In the forests near the river, in Muzaffargarh, there is a small quantity of self-sown shisham springing up among the poplars; efforts will be made to extend the shisham growth."

Montgomery.

59. Mr. Pinder reports that in the Okara, Satgharra and Kamman Reserves, which were recently felled over, the stools, both of *jhand* and *farash*, have coppiced freely. Of the former species every stool has produced shoots. The coppice is fairly good in other places.

Phillour.

60. Mr. Down's report shows that the progress of natural reproduction in 2,000 acres of the Kalcser forest is fairly satisfactory.

General remarks on divisional reports.

61. The above extracts point in an unmistakeable manner to the benefit resulting from the protection of young forest growth against injury by grazing and fires; and show that every possible effort should be made to afford this protection in the

comparatively small areas it may be possible to set aside permanently for the growth of trees, as distinguished from other areas which may be maintained chiefly as grazing grounds. It is manifestly of importance that, in the former class of forests, the fullest possible crop should be allowed to spring up, so that the area reserved for this purpose may be proportionally reduced. To follow this principle would doubtless result in a smaller amount of interference with the grazing practices of the people, than to be content with half a crop, grown on a more extended surface.

Natural reproduction in jhand forests.

62. During a tour made in company with Mr. Elliott in the Mooltan District, the attention of the Conservator was attracted to the regeneration of jhand forest by means of root suckers. The following is an extract from a report on his tour, submitted to Government through the Financial Commissioner:—

"In Akil (Serai Sidhu), I particularly noticed the root-suckers thrown up by the jhand. I had seen them before in Vinoi and Makhdumpur; but here they were more conspicuous on the sites of the old fellings. When the tree is cut down, they spring up in all directions, both near the stool and at considerable distances from it, in the bare ground between the stools."

"Until I saw them, I did not see what hope there could be for these forests in the future, situated as they are on perfectly dry, unirrigable bar land. The crop is everywhere thin, showing a number of isolated trees, with hard and absolutely bare ground between them.

"I had always heard, and my own experience confirmed this, that natural regeneration of seedlings in such ground is not to be hoped for. It appeared that, if this were so, we should be dependent solely on coppice shoots; and what hope could there be of maintaining the crop by this means, under the system of felling by contractors at present in vogue, or indeed under any other system of cutting? for the death of a certain proportion of the stools is inevitable. It appeared to me then that our stock must be a gradually, and perhaps a rapidly, vanishing quantity.

"But I now find to my satisfaction, that jhand roots, in common with those of some other species (among which I think is the jál or *salvadora*—a common tree in these reserves) possess the property of throwing up abundant suckers after the tree has been cut down, or even, in a less degree, when it has been burnt or otherwise injured; and I feel no doubt that the existence of these forests at the present day is due, partly to this fortunate circumstance, and partly to the remarkable coppicing power of the farash, which throws out strong and numerous shoots from the stool, no matter how old the felled tree may have been, or how roughly it may have been hacked down. The farash coppice grows very rapidly, and is not nearly so much browsed as that of jhand."

Similar observations were made in the Shujabád reserve, Jelálpur, where, on an area burnt in 1887, the root suckers produced solely by the action of fire on the trees were specially noticed. They were, however, not nearly so numerous as on compartments which had been felled after the burning. Some suckers were found at a distance of 30 feet from any tree, and were dug up in order to make sure of what they were. In Naurája-Bhuta, the forest is rapidly filling up by means of root suckers, the growth in some places being so strong that it is no longer possible to ride through it. It was observed that, even where trees had not been cut down or burnt, there were a few root suckers; but the shock given by the cutting of the tree, and in a less degree by its being severely burnt, develops them abundantly on the worst *pat* soil, through which many were appearing around the stools.

The Conservator's report continues thus:—

"I feel no doubt, from observations made in many places, that, at any rate, in this part of the Punjab, the regeneration of jhand on *bár* land, without irrigation, can be effected by means of coppice and root suckers. When a tree has been felled, not only is there a good crop of coppice shoots springing from the stool, but there are also numerous root suckers surrounding it in all directions, and thus tending to complete and increase the stock. When these latter reach an age at which they can be profitably removed, there is no doubt that they will, in their turn, give out similar shoots and suckers, and that the stock, in many places, will thus be completed. I do not say that the conditions are uniformly favorable over the area; but it is a fact that most of the trees cut down produce successors in the manner above described.

"But in order that a jhand forest may be able to reproduce itself in this manner, it is absolutely necessary that it should be rigidly closed after felling, and that the closure should be prolonged until the young growth has attained a height that renders it safe from damage by browsers. I am not at present sure what this time should ordinarily be; and careful observation of facts bearing on the subject should be made. I am at present inclined to think that it may be from 5 to 8 years, when the animals are other than camels.

"In connection with this question it should be carefully noted whether or not the jhand roots continue to give out suckers for several years after the trees have been felled. I have requested Mr. Elliott to note this, and also to try the experiment of promoting a plentiful growth of suckers by picking up the ground near trees and stools, and thus wounding the surface roots."

6. Artificial Reproduction.

General remarks

63. Work under the heads of Regular Plantations and Cultural Operations taken together extended over 2,615 acres. But 1,214 acres, replanted or resown during the year, have to be struck off as failures: 30 acres were lost by erosion, and a further reduction of 28 acres occurred through errors made in former returns; so that the net actual increase in area is only 1,343 acres. The total area under plantations and cultural operations stood, at the close of the year, at 19,399 acres.

Regular plantations

64. 24 acres in *Jhelum* were planted, but 4 acres of previous failures were struck off. 30 acres in the *Chenab* Division were planted, but entirely failed. In *Lahore*, 82 acres of blanks in the Changa Manga plantation, and 15 acres in Shahdara, were filled up 47 acres of failures, and 58 acres of extensions in Jhoke, were planted and sown. The two first-named areas, amounting together to 129 acres, were struck off as failures. In *Phillour*, 38 acres at Sabathu, and 219 acres at Dagshai, were sown or planted; but the failures of previous years' work, now struck off, amount to 153 acres.

Cultural operations

65. In *Hazara*, sowing extended over 345 acres, principally in Khanpur and Kaghan. In *Chamba*, 23 acres were added to Kálatop; blanks were filled up over an area of 31 acres in Kainthli; and small areas, amounting in all to 6 acres, were added to Bolúr, Chatri, and Khanni. 31 acres of blanks in Kainthli were struck off as a failure of previous years' work. In *Kangra*, planting and sowing extended over 386 acres, of which 320 acres were chil sowing, in reserves and *trihais*, and 60 acres were sowings and plantings of bamboo. The chil sowing of former years are reported to have, generally speaking, made good progress. From 40 to 60 per cent. of bamboo root—plantings have succeeded. 181 acres of previous failures were struck off. In *Kulu*, cultural operations extended over an area of 85 acres, in 55 acres of which more than 68,000 deodar transplants were put out, and in 30 acres of which chil seed was sown broad—cast. 73 acres, however, had to be struck off as failures In *Bashahr*, 68 acres were planted or sown, principally with deodar—31 acres of failures are struck off the register. In *Jhelum*, 4 acres were planted in Ban Faqirulla, but 2 acres were struck off. In the *Chenab* Division, 50 acres were trenched and sown with kikar seed in Rakhs Ishar and Deowal; but the season was an unfavorable one. A nursery of one acre was formed in the Chichra reserve. Planting and sowing were continued in the Pabbi Reserve, where 100 acres of the Dokassa basin were taken in hand. The Conservator has had the question of the further development of this work under consideration and has referred to the Chief Engineer, Provincial Works, and the Manager of the North-Western Railway, with a view to ascertain what effect, if any, has been produced on the road and railway by the partial afforestation of the hills in their vicinity. In *Lahore*, 58 acres of Kot Lakhpat, and 184 acres of Dhig, were sown or planted; but with the exception of 20 acres in the former rakh all the sowings were failures. In *Mooltan*, 250 acres of the Makhdumpur reserve were sown with *jhand*, and irrigated, so long as a supply of water was available, by means of a channel departmentally constructed. The seedlings are said to be doing well over about 100 acres; but the remainder of the area has been struck off as a failure. Advantage was taken of the construction of an escape from the Vinoi *Rajbaha*, to water about 350 acres of the reserve of that name, and sow it with *jhand* seed. About two-thirds of this area, or 220 acres, are pronounced a success, but the remainder has been struck off the register. Mr. Elliott remarks that, in most forests of the Division, *jhand* was sown in plough lines, wherever any moisture had collected after floods or rain; but that in no case had success been attained. The seed germinates freely if the soil be damp enough; but it subsequently dies as the moisture gradually dries up. 155 acres of such sowings were made in various rakhs, but 119 acres failed. In *Montgomery*, 21 acres were sown, but 25 acres were struck off the register as failure.

7.—Early thinnings, removal of inferior species, cutting of creepers, clearing of inferior lines, &c.

Details by Divisions.

66. The following are the principal work carried out during the year in each division :—

In *Rāwalpindī*, inferior species were thinned out over an area of about 15 areas of the Soribari forest. *Chamba.*—*Kail* were girdled over 60 acres of Chatri, and 11 acres in Kainthli were cleared of oaks; 180 acres in Padri were cleared of inferior species. *Kangra.*—Climbers were cut in 50 acres of the Gumár reserve; *kána* grass was removed from 91 acres of the Baghrian plantation. *Bashahr.*—22,538 spruce and blue pine were ringed on north-easterly slopes in the Kilba range, where the young deodars were found to be suffering from their shade. Climbers were cut from 4,519 deodar trees. *Lahore.*—The carob plantation was carefully thinned out. *Mooltan.*—Nearly 4 miles of compartment lines, 10 feet wide, in the Lodhran range were cleared, and levelled, tree-stumps being dug out. Some similar work was done in Makhan Bela, Muzaffargarh.

General remarks.

67. With reference to the extensive clearance of inferior species carried on in Chamba, Mr. McDonell remarks as follows:—

"In dry forests, there is little doubt they will have good results; but in damp situations the rapid growth of coarse herbage and undergrowth will retard the growth of the young plants to a great extent, and it will probably be necessary to resort to clearing until the plants have attained sufficient strength to force their way upwards."

In the opinion of the Conservator of Forests great care has to be taken to proceed gradually, so as not to allow the springing up of a dense growth of shrubs and herbs, in which it is well known that the difficulty of establishing a crop of deodar is great. It is thought that deodar should be planted before heavy thinnings are made among the existing crop of trees, and that these latter should be removed by degrees, as soon as the young deodars, which will stand a considerable amount of shade while maintaining a slow rate of growth, have got hold of the ground. They then have a chance, as the overhead cover is removed, to shoot up in advance of or with the shrubs, and to hold their own with them. A somewhat similar system would be followed in case it were desired to establish naturally sown seedlings of deodar; the other trees being removed very gradually, so as to favor the growth of the latter species. To make anything like wholesale clearances, is to abandon the strong position afforded by the ground being already occupied by a full crop of trees of some sort. To gradually change the character of such a forest, in any desired direction, by skilful treatment, is a task which, compared with that of raising a young forest of deodar in a jungle of *Indigofera*, and other shrubs and coarse herbage, is an easy one.

8.—Experiments and exotic trees.

General remarks.

68. Considerable attention was paid to experiments with exotic trees; but the results attained do not appear generally to have much importance. The following facts may, however, be noticed. Mr. McDonell says that the hedge plant, *Paliurus aculeatus*, is evidently unsuited to the hills of this part of India for its growth is far too slow to permit of its being of any practical use. Mr. Carr remarks that the growth of the olive from the south of France is greatly retarded by a blight which has the appearance of "sticky cotton wool," and has attacked the leaves and shoots for the last three years. The Spanish chestnut continues to do well in Bashahr. There are now 94 trees of various sizes up to 32 feet high and 4½ feet in girth at Kilba and Nachár. This species continues to grow well at Manáli in Kúlu. 5 trees at Kálatop have not flowered, as they suffer from frost. The salt-bush plants in the carob plantation at Lahore, are thoroughly established and seed profusely. They are regularly irrigated. This species grows well in the Government garden at Mooltan, where it has the benefit of shade and water; but it fails in dry localities. The bamboos at Changa Manga have all been uprooted by pigs.

9.—Communications and Buildings.

Roads and bridges.

69. The following amounts were expended during the year on roads and bridges, *viz* :—

	Rs.
On construction	3,156
On repairs	3,354
Total ...	6,510

In the hills, 23 miles of riding roads and 23 miles of inspection paths were made, while 144 miles of riding roads and 138 miles of inspection paths were repaired. The principal work was in Chamba and Bashahr. In the latter Division, two large bridges over the Sutlej, at Sholtu and Chora, were repaired. In the plains, 3 miles of bridle paths were made, and 7 miles were repaired.

Buildings.

70. The expenditure on construction and repairs of buildings was as follows, *viz* :—

	Rs.
On construction	4,639
On repairs	3,399
Total ...	8,038

The greater part of this money was spent in Chamba and Kulu. A new house was built at Nagar for the Kulu Forest Officer. Four rest-houses were constructed in Chamba.

Statement of existing roads and buildings

71. It was the intention of the Conservator to give in the present report a complete statement showing what has been done up to date by the Department in the way of opening up the forests by the construction of roads, bridges and buildings of various classes; but the instructions were unfortunately issued too late to admit of accurate returns being submitted by all Divisions; and the statement cannot therefore be given until next year.

CHAPTER IV.—YIELD AND WORKING.

Summary of produce removed from the Forests.

Summary of removals from the forests (Forms Nos. 54 and 55)

72. The total outturn of the year in *timber and firewood*, expressed in cubic feet, compares as follows with that of the previous year, *viz* :—

	1886-87	1887-88.
	Rs.	Rs.
Removed by Government agency.	32,86,656	28,61,842
Do. purchasers ...	79,41,370	56,50,573
Do. as free grants and by right-holders ..	1,14,24,208	2,91,93,085
Total	2,26,52,234	3,77,05,500

That is to say there was an estimated increase during the year under report of about 150½ lakhs of cubic feet.

The value of the *minor produce* removed in the two years compares thus :—

	1886-87	1887-88.
	Rs.	Rs.
Removed by Government agency ..	14,092	14,277
Do. purchasers ...	1,51,207	2,02,567
Do. as free grants and by right-holders ...	11,042	2,18,435
Total .	1,76,341	4,35,279

The estimated enhancement in the value of produce of this class removed during the year is more than 2½ lakhs of rupees. These large increases will be explained below; but it may be observed here that they are chiefly due to entries of produce given as free grants and to right-holders.

1.—Departmental Operations.

Selection fellings (Form No. 53)

73. 8,294 trees were felled during the year; 6,503 of these were deodar, and 982 were pines of various kinds. There was a decrease of 3,510 trees, as compared with the fellings of the previous year; this occurred principally in Rawalpindi, where firewood for the Murree Brewery was not required, and in Chamba, where the number of deodar trees felled was reduced by 1,182.

74. The removals of *timber and firewood* from the forests by departmental agency amounted to 28,61,842 cubic feet, being a decrease of 4,24,814 cubic feet on the figures of 1886-87. There were decreases in the following divisions *viz*:—*Lahore* and *Chenab*, 5,08,611 and 56,334 cubic feet, respectively, on account of a reduction in the demand for engine fuel; *Rawalpindi*, 1,56,142 cubic feet, owing to the smaller indents received from the Murree Brewery, which obtained its supplies from the Hazara Division, under the head of 'Removals by purchasers;' the fellings in *Chamba* yielded less by 84,039 cubic feet. But there were increases in other divisions, *viz.*, in *Mooltan* 1,66,247 cubic feet, due to the necessity for felling, by Government agency, a large area in the Shujabád reserve, which had been severely injured by fire. In *Hazára*, there was an increase of 75,242 cubic feet of timber required for the reconstruction of barracks at Abbottabad, and a further, but apparent increase of 10,000 cubic feet, owing to an error in the previous year's returns. The timber works in *Bashahr* and *Kulu*, yielded increases of 70,009 and 58,422 cubic feet respectively.

Removals from the forests (Forms Nos 54 and 55).

The value of *minor produce*, removed by Government agency, exceeded that of 1886-87 by Rs. 185 only.

75. The accounts for timber, drift wood, firewood, bamboos and miscellaneous produce, are shown on separate forms.

Account of timber and other produce (Form No. 56)

Timber.—Omitting transfers to and from sale depôts, the receipts and disposals were less than those of 1886-87 by 1,21,370 and 4,21,311 cubic feet respectively. The balance in hand at the close of the year was increased by 2,33,469 cubic feet. The reduction in *receipts* is thus explained:—

			Cubic feet.
The receipts of	deodar logs from the forests were less by about		48,000
Ditto	sleepers	do. do.	31,000
Ditto	pine and other wood	do. do.	26,000
Ditto	pine and other wood sold locally	do.	20,000

The difference between the total of these items and 1,21,370 cubic feet, is due to the entry of wood omitted from the previous return. The reduction in *disposals* is accounted for chiefly as follows, *viz*:—

	Cubic feet
The removals of deodar logs by purchasers from depôts, were less by about	1,25,000
The removal of sleepers by purchasers from depôts, were less by about ...	2,50,000
The removal of pine logs by purchasers from depôts, were less by about	13,000
The amount of pine and other wood sold locally, was less by about .	20,000

The increased balance in hand is due to 78,000 more cubic feet of deodar logs and 1,70,000 more cubic feet of sleepers, having been brought to depôt than were sold; but, on the other hand, a portion of the old stock of pine logs was sold. The market for deodar logs fell towards the close of the year, and consequently further sales were stopped; about 50,000 B. G. sleepers were ready for delivery to the Patiala-Bhatinda Railway, but the Engineer-in-Chief was unable to take them over. 7,117 cubic feet of boxwood were in hand, but could not be sold as the market was unfavorable.

Drift timber.—The account in its present from is now given for the first time. The figures do not appear to call for remark.

Firewood and Charcoal.—The transactions of the year, and the balance in hand at its close, do not differ to an important extent from those of the previous year. The balances in forest depôts are brought on to the returns for the first time.

Bamboos. The transactions of the year were less than those of 1886-87 by about 69,000.

Miscellaneous produce. The figures do not appear to call for remark. It has been arranged to undertake, as an experiment, the establishment of a grass reserve of 300 acres in Serai Sidhu, for the supply of forage to the Cavalry horses at Mooltán.

76. The timber floated down the five rivers is brought to depôts near the line of railway, and subsequently sold by the officers in charge of the divisions in which they are situated. But in the case of the Rávi, the depôt is under the officer in charge of the Chamba Division, whence the timber comes. The Conservator has had under preparation revised forms of periodical returns, for use by the Upper and Lower Divisions respectively, showing the timber launched in the hills and arriving at the depôts. These will shortly be issued; and measures will at the same time be taken to check, as far as possible, the quantity of timber lying in the rivers above the depôts.

General remarks.

It has been found that the system, under which the disposal of Government timber at the depôts rests in the hands of five different officers, has some serious drawbacks; and two Departmental Circulars have been issued, with a view to putting matters on a better footing, by placing the officers in communication with one another, and in other ways. There can be little doubt that it would be advantageous to place all the depôts under a single officer, if this could be arranged for. The system of classification adopted in the depôts, and the scale of *minimum* prices, are under revision.

The Native States of Chamba and Basháhr benefit considerably by the large amount of Government money spent in them, in connection with the works carried out by the Forest Department; and the same may be said of British territory in Hazára and Kulu. In the next report, the amount estimated to have been spent in each locality during the current year will be stated.

2.—Removal of produce by purchasers.

77. The removals of timber and firewood from the forests by purchasers, were reduced by 22,90,797 cubic feet, as compared with the figures of the previous year There was a decrease of 24,50,624 cubic feet in the Montgomery, Mooltan, and Lahore Divisions, due almost entirely to the lessened demand for engine fuel; and a decrease of 2,43,222 cubic feet in Rawalpindi, consequent on the orders to confine such removals to fixed localities. There was an increase of 1,76,264 cubic feet in Hazara, due to the supply of wood from Khánpur to the Murree Brewery; and of 1,97,725 in the Chenáb Division, on account of wood supplied on the new canal works.

General remarks (Forms Nos. 54 and 55).

The value of *minor produce* removed by purchasers was more than that taken out during the previous year by Rs. 51,360. This is accounted for by increases in grazing dues in the Chenab and Montgomery Divisions.

In order to regulate the manner in which the right to cut firewood in the plains' rakhs is sold, a deed of agreement, for general use in such transactions, has been drafted, and submitted to the Government Advocate for opinion.

3. Produce given in free grants and removed by Right-holders.

78. The orders of the Government of India regarding the record of removals as free grants, and under privileges and rights, were not received until the end of the year; but an endeavour has been made to estimate their amount with as much accuracy as possible, and to classify them in accordance with the prescribed definitions. It is, however, again necessary, in view of what was said on this subject in the report of the previous year, to deal with them all together, when comparing the figures of the year under report with those of 1886-87. A more careful distinction having now been drawn between produce removed as free grants and by right-holders, it will, in future years, be possible to treat of each class separately. Form No. 54 shows the total amount of *timber and firewood* given as free grants to be 6,63,971 cubic feet, and that of produce supplied to right-holders to be 2,85,29,114 cubic feet; the total increase thus amounts to 1,77,68,877 cubic feet. This is due to the estimate for several Divisions having been either given for the first time, or revised. The figures recorded for Kulu appear to call for explanation. The estimate seems very large, but it is not thought to be in excess of the actual amount consumed by the people. Mr. Carr put the amount

Timber, and firewood (Forms Nos 54 and 55).

down at 3,28,75,000 cubic feet; but, in Mr. Lemarchand's opinion, 2,31,16,700 cubic feet was a sufficient estimate. As, however, both these figures include produce taken from undemarcated tracts not shown in the area statement, the latter amount was still further reduced by the Conservator to that shown in the returns, *viz.*, 1,50,69,805 cubic feet, or more than 149 lakhs in excess of the amount shown for 1886-87. The officer in charge of the Chamba Division has struck out 4,78,680 cubic feet shown in his estimate for that year, as it was taken from unreserved forests, not on the books of the Department. The above remarks will serve to show the difficulty that has been experienced in preparing these estimates, for which accuracy is not claimed. It is hoped that by degrees more reliable figures will become available.

Minor produce.

79. There is also a large increase in the estimated value of *minor produce* given as free grants and to right-holders, amounting to Rs. 2,07,393. The largest increase (Rs. 1,64,412) occurs in Kulu, there being considerable additions in Ráwalpindi and Bashahr. The remarks in the previous paragraph refer also to this produce.

Quality of produce given.

80. With reference to the remarks made by the Government of India on last year's report, Divisional Officers were requested to afford information on the subject of the quality of the produce given as free grants and to right-holders; but the orders were issued too late to enable reliable data to be collected. This question will be dealt with in the report for the current year. It is believed that the produce is, as a rule, of good average quality.

4.—Imports.

General summary.

81. A statement of the imports of timber and bamboos will be found in Appendix (D). The figures compare thus with those of 1886-87 :—

Description of timber.	1886-87	1887-88	In 1887-88	
			More.	Less.
Deodar logs ...	21,291	34,011	12,720	...
Pine logs	1,771	1,719	...	52
Sleepers	2,93,294	3,03,558	10,264	...

A statement, prepared from previous reports, and showing the quantity and description of timber imported from Kashmir between 1879-80 and 1887-88, will be found in Appendix (E).

CHAPTER V.—FINANCIAL RESULTS.

General summary.

82. The financial results of the year compare as follows with those of 1886-87 :—

Years.	Revenue.	Expenditure.	Surplus.
1885-86	... 8,50,419	... 6,75,483	... 1,74,936
1886-87	... 11,27,277	... 7,16,510	... 4,10,767
1887-88	.. 7,86,937	... 6,77,912	. 1,09,025

The revenue and expenditure were less by Rs. 3,40,340 and Rs. 38,598 respectively. The surplus was less by Rs. 3,01,742.

Revenue (Form No. 58).

83. The fall in revenue is fully explained by the figures given in paragraph 75, under the head of "Timber," and in paragraph 77. Had the Patiala-Bhatinda Railway authorities taken over the sleepers that were ready for them, the revenue,

allowing for an average number of rejections, would have improved by about Rs. 1,40,000, and the deficit on the estimate (Rs. 9,74,000) would have been about Rs. 47,000 only. The holding back from sale of deodar logs, in consequence of the fall in prices, more than accounts for this amount. The unsold logs and sleepers are in stock; and a reference to paragraph 88 shows that although the actual cash surplus was only Rs. 1,09,025, the net result of the year's transactions was in favor of the Department by Rs. 2,88,304. The estimated surplus was Rs. 2,90,000.

Expenditure (Form No 58.)

84. The expenditure of the year under the head of (A) "Conservancy and Works," was less than that of 1886-87 by Rs. 32,237. This is explained by a reduction of Rs. 26,089 in the charges on account of timber removed by Government Agency, chiefly in Chamba, where, as previously explained, work was considerably restricted; and also by a reduction of Rs. 5,278 on roads and bridges, and of Rs. 7,755 on demarcation. There was, however, an increase of Rs 6,285, due to the provisions of the new Chamba lease having come into force for the first time. A reduction of Rs. 6,361 occurred under (B) "Establishments."

Financial result (Form No 62).

85. The surplus or deficit under the three great heads of account, were as follows for the last three years:—

	1885-86.		1886-87.		1887-88.	
	Surplus.	Deficit.	Surplus.	Deficit.	Surplus.	Deficit.
I. Departmental timber operations ...	99,329	...	3,04,816		4,963	...
II. Other Revenue	2,53,874		2,86,156	...	2,73,039	
III. Protection, &c. . .	...	1,78,267		1,80,205	...	1,68,977
Total	1,74,936		4,10,767	...	1,09,025	...

The small profit on departmental operations is caused by the non-sale of sleepers and deodar logs, as above explained.

Outstandings of revenue, (Form No. 60)

86. In compliance with the orders of Government, issued on the 31st January, strenuous endeavors were made to collect all demands of revenue falling due within the year, and the outstandings were reduced by Rs. 23,310, *viz.* from Rs. 65,970 to Rs. 42,660.

Outstanding against Contractors and Disbursers, (Form No. 61)

87. The balance owed to the Department by Contractors and Disbursers, was increased by Rs. 242 only.

Net result of the year's transactions

88. The following figures represent the value of the year's transactions :—

	Rs.
Cash surplus (Form No. 58) ..	1,09,025
Add—	
Increased value of produce at depôts (Form No. 57) ...	2,02,589
	3,11,614
Deduct—	
Reduction on Revenue outstandings (Form No. 60)	23,310
Total in favor of the year ...	2.88,304

This does not take account of the large quantity of produce given away as free grants and supplied to right-holders. An endeavour was made to ascertain the value of these issues; but the figures are incomplete. It is hoped that next year's report may deal with the subject.

Results of the year by Divisions after adjustment of accounts for timber works between Hills and Plains Divisions.

89. The following statement shows the results of the year, by divisions, after the adjustment of accounts for timber works:—

Divisions.	Revenue.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
Hazara	95,637	53,930	41,707	...
Rawalpindi	29,650	29,003	647	...
Chamba	87,107	2,03,419	...	1,16,312
Kangra	32,144	25,537	6,607	...
Kulu	35,766	41,968	...	6,202
Bashahr	1,20,022	1,07,562	12,460	...
Jhelum	24,072	25,594	...	1,522
Chenab	1,30,542	36,287	94,255	...
Lahore	67,911	58,921	8,990	...
Mooltan	58,673	29,196	29,477	...
Montgomery	99,960	12,461	87,499	...
Phillour	5,376	13,567	...	8,191
Direction	77	40,467	...	40,390
TOTAL ...	7,86,937	6,77,912	1,09,025	...

The question how this adjustment can most easily and correctly be effected has been under consideration, and a circular on the subject will shortly issue. The deficits are mainly caused by the non-sale of timber collected by Departmental agency.

Classification of accounts.

90. The Conservator has had under preparation a Departmental order on the subject of the classification of items of revenue and expenditure, under the proper heads and sub-heads; it is hoped that this, when issued, well tend to avoid errors of classification, and thus both to render the accounts more accurate and to reduce office work.

CHAPTER VI.—GENERAL REMARKS.

General summary of administration.

91. The area of reserved and protected forests was not added to during the year, but a considerable amount of boundary work was accomplished. Three working plans, *viz.*, two for Chamba and one for Changa Manga, were sanctioned. The special working plans branch temporarily ceased to exist owing to paucity of officers. Forest fires were not numerous, and the damage done was comparatively small. The areas closed, either entirely or partly, against grazing were increased, chiefly in the Salt Range; but the people have been permitted to cut

and carry grass from the closed areas, and the practice of utilising it in this manner is extending. The progress of natural regeneration appears to be, generally speaking, satisfactory; close attention has been paid to the regeneration of *shand* forests where irrigation is not practiced. The area under artificial regeneration was increased. A fair amount of work was done in the construction and repair of roads and buildings.

The total outturn of the forests is, apparently, very much in excess of that of the previous year, owing to the entry of produce given as free grants and made over to right-holders, the estimates for several Divisions being either now given for the first time or being largely increased on revision. Departmental operations were curtailed under all heads. The large reduction in the quantity of wood thus removed from the forests, is due principally to a falling off in the demand for engine fuel from Changa Manga; the quantity of wood which reached the depôts was less than that received in 1886-87. The disposals were still more reduced owing, on the one hand, to a fall in the price obtainable for deodar logs, which led to the holding back from sale of a considerable number of them, and, on the other hand, to the Engineer-in-Chief of the Patiala-Bhatinda Railway having been unprepared to take over the sleepers that were ready for delivery to him. The stock in hand at the close of the year was consequently largely increased. Removals by purchasers were much less than those of the previous year, on account, mainly, of the lessened demand for engine fuel. The figures representing the amount of produce made over as free grants and to right-holders, are the results of estimates only, and accuracy is not claimed for them; but it is hoped that the record may, in the course of time become more reliable.

The above remarks serve to explain why the expected surplus revenue was not realized; but, if the increased value of stock in hand and the reduction on outstandings be taken into account, it is seen that the net result of the year's transactions, in favour of the Department, very nearly approaches that sum.

STATEMENTS.

Form No. 49.

AREA OF RESERVED FORESTS, 1887-88.

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1887.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1888.		No. and date of Notification of addition or transfer.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.	
Hazara.	Dungaguli	Hazara ...	Dungaguli Reserves ...	40,716	63·62	...	...	40,716	63·62	
	Kaghan ...	Do ...	Kaghan Reserves ...	57,487	89·82	...	...	57,487	89 82	
	Siran ...	Do ...	Siran Reserves	20,986	32·79(a)	...	...	20,986	32 79	
	Khanpur...	Do ...	Khanpur ,,	31,786	49·67(a)	...	...	31,786	49·67	
			Total ...	1,50,975	235·90	...	...	1,50,975	235·90	
Rawalpindi.	Rawalpindi	Rawalpindi	Rawalpindi Reserves ...	35,520	55·50	...	...	35,520(b)	55·50	
	Attock ...	Do ...	Attock Reserves ...	6,420	10·03	...	1,000(c)	5,420	8·47	
	Fatehjang	Do ...	Fatehjang Reserves ...	13,982	21·85	1,000(c)	...	14,982	23·41	
	Kahuta ...	Do ...	Kahuta Reserves ...	41,072	64 18	...	...	41,072	64·18	
	Murree ...	Do ...	Murree Reserves ...	30,462	47·60	...	...	30,462	47·60	
			Total ...	1,27,456	199·16	1,000	1,000	1,27,456	199·16	
Chamba.	Pangi ...	Chamba ...	Pangi forests	38,000	59·38	...	...	38,000	59·38	
	Dalhousie	Do ...	Kalatop ...	2,602	4·06	...	...	2,602	4·06	
	Do ...	Do ...	Kainthli ...	964	1·51	...	...	964	1 51	
	Do ...	Do ...	Bakloh ...	643	1 00	...	...	643	1 00	
	Do ...	Do ...	Banikhet ...	517	0·81	...	...	517	0·81	
	Bhandal ...	Do ...	Bhandal forests ...	9,797	15·30	...	...	9,797	15·30	
	Tisa ...	Do ...	Tisa forests	23,834	37·24	...	...	23,834	37·24	
	Barmaur...	Do ...	Barmaur forests ...	19,373	30·27	...	...	19,373	30·27	
	Chamba ...	Do ...	Chamba forests ...	17,975	28·09	...	...	17,975	28·09	
			Total ...	1,13,705	177·66	...	...	1,13,705	177 66	
Kangra.	Dera ...	Hoshiarpur	Dera Reserves	14,913	23·30	...	...	14,913	23·30	
	Do	Kangra ...	Do.	11,066	17·29	...	...	11,066	17·29	
	Beas River	Amritsar...	Gagriwal ...	445	0·70	...	...	445	0·70	
	Do	Hoshiarpur	Belas ...	555	0·87	...	25(d)	530	0 83	
	Nurpur ...	Kangra ...	Nurpur Reserves ...	9,402	14·69	...	...	9,402	14·69	
			Total ...	36,381	56·85	...	25	36,356	56 81	
Rashahr.	Neogli ...	Simla ...	Neogli Reserves ...	14,720	23·00	23,200(e)	...	37,920	59·25	
	Tranda ...	Do	Tranda reserves	19,840	31·00	...	8,710(e)	11,130	17·39	
	Kilba ...	Do	Kilba ,,	6,833	10·68	...	...	6,833	10·68	
	Kailas ...	Do	Kailas ,,	25,600	40·00	...	9,870(e)	15,730	24·58	
	Chini ...	Do	Chini ,,	13,440	21·00	610(e)	...	14,050	21·95	
	Pandrabis	Do	Pandrabis ,,	28,800	45·00	...	17,442(e)	11,358	17·75	
	Pabar ...	Do	Pabar Giri and Rupin Forests	...	...	1,825(f)	...	1,825	2·85	Govt. of India No. 93, dated 23rd Jany. 1888.
			Total ...	1,09,233	170·66	25,635	36,023	98,846	154·45	

Form No. 49.

AREA OF RESERVED FORESTS, 1887-88.—(continued.)

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1887.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1888.		No. and date of Notification of addition or transfer
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.	
Jhelum.	Jhelum ...	Jhelum ...	Jelum Reserves	83,963	31·19	...	..	83,963	131·19	
	River ...	Do	Reserved Belas	2,162	3·38	...	238(*g*)	1,924	3·00	
	Talagang ..	Do	Talagang Reserves ...	24,671	38·55	...	...	24,671	38·55	
	Chakwal ...	Do	Chakwal Reserves ...	14,689	22·95	...	...	14,689	22·95	
	Pind Dadan Khan ...	Do	Pind Dadan Khan Reserves ...	68,489	107·01	...	...	68,489	107·01	
			Total ...	1,93,974	303 08	...	·238	1,93,736	302·70	
Chenab.	Chenab River	Gujrat ...	Gujrat Reserves ...	1,760	2·75	...	25(*h*)	1,735	2·71	
	Do.	Do	Kathala plantation ...	916	1·43	93(*k*)	41(*h*)	968	1·51	
	Pubbi ...	Do	Pubbi ...	25,185	39·35	...	...	25,185	39·35	
	Phalian ...	Do	Phalian Reserves ...	20,006	31·26	...	...	20,006	31·26	
	Gujranwala	Gujranwala	Gujranwala Reserves	876	1·37	...	...	876	1·37	
	Chenab River	Do	Thatta Faqirulla ...	1,112	1·73	....	100(*h*)	1,012	1·58	
	Hafizabad	Do	Hafizabad Reserves ...	36,997	57 81	...	...	36,997	57·81	
			Total ...	86,852	135·70	.93	166	86,779	135·59	
Lahore.	Chunian ...	Lahore ...	Changa Manga Plantation Circle ...	10,132	15·83	...	...	10,132	15·83	
			,, Rakh Circle.	10,111	15·80	...	70	10,041	15·69	No. 558 F. dated 22nd June 1887.
	Lahore ...	Do	Shahdera plantation ...	1,254	1·96	...	...	1,254	1·96	
	Do	Do	Carob plantation.	23	·06	..	...	23	·04	
	Do	Do	Sadhanwali plantation.	349	·54	...	...	349	·54	
	Do	Do	Jhoke plantation.	2,976	4·65	...	...	2,976	4·65	
	Do	Amritsar...	Amritsar Reserves ...	2,323	3·63	...	...	2,323	3·63	
			Total ...	27,168	42·45	...	70	27,098	42·34	
Mooltan.	Serai Sidhu	Mooltan ...	Serai Sidhu Reserves ...	33,613	52·52	...	...	33,613	52·52	
	Lodhran ..	Do	Lodhran Reserves.	7,736	12·09	...	...	7,736	12·09	
	Mailsi ...	Do	Mailsi Reserves.	28,918	45·18	..	...	28,918	45·18	
			Total ...	70,267	109·79	...	...	70,267	109·79	
Montgomery.	Gugera ...	Montgomery	Gugera Reserve	22,510	35.17	...	...	22,510	35·17	
	Do	Do	Montgomery Reserves.	18,607	29·07	...	...	18,607	29·07	
	Do	Do	Chichawatni Reserves.	14,618	22·84	...	...	14,618	22 84	
			Total ...	55,735	87·08	...	...	55,735	87·08	

Form No. 49

AREA OF RESERVED FORESTS, 1887-88.—(continued).

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1887. Acres.	Area on 1st April 1887. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area on 31st March 1888. Acres.	Area on 31st March 1888. Equivalent in square miles.	No. and date of Notification of addition or transfer.
Phillour	Phillour ...	Jullundur...	Jullundur plantation ...	51	·07	...	...	51	·07	
	Do.	Do.	Phillour plantation ...	220	·34	...	...	220	·34	
	Ludhiana...	Ludhiana ...	Ludhiana plantation ...	197	·31	...	...	197	·31	
	Do.	Umtalla ...	Jagadhri plantation ...	201	·33	...	...	201	·33	
	Kalesar ...	Do.	Kalesar Reserves ...	11,829	18·48	...	...	11,829	18·48	
			Total ...	12,498	19·53	...	...	12,498	19·53	
Simla		Simla	Kotgarh ...	1,454	2·29	...	...	1,454	2·29	
		Do.	Kotkhai ...	7,190	11·23	...	...	7,190	11·23	
			Total ...	8,644	13·52	...	...	8,644	13·52	
			Grand Total...	9,92,888	1,551	26,728	37,521	982,095	1,535	
		Total for 1886-87 ...		9,06,702	1,416·70	88,627	2,441	9,92,888	1,551	

(*a*) and (*c*), correction of previous return; (*b*) including 11,200 acres under Military authorities in Margalla; (*d*) and (*h*), by river action; (*e*) by re-estimation of areas according to recent demarcation; (*f*) transferred from North-Western Provinces; (*g*) under *Hast-i Sikandri* system 37, and by river action 201 acres; (*k*), 11 acres by correction of area, and 82 acres added, *Vide* Financial Commissioner's No. 5551 of 7th November 1887, to Commissioner, Rawalpindi.

Abstract of changes during the year.

			Acres.
Area at the commencement of year			9,92,888
Added—			
By transfer from the North-Western Provinces ...	1,825		
Erroneously excluded in previous years from Chenab Division	82		
		... 1,907	
Excluded—			
By grant in the Lahore District	70		
By river action	420		
By correction of areas (*principally* in Bashahr) ...	12,201	... 12,700	
Net reduction ...			10,793
Area at close of year			9,82,095

AREA OF PROTECTED FORESTS, 1887-88.

Rawalpindi	Fatahjang	Rawalpindi	Kalachitta ...	93,194	145·62	...	...	93,194	145·62	
	Murree ...	Do.	Murree Protected Forests	23,322	36·30	...	...	23,232	36·30	
	Kahuta ...	Do.	Kahuta ...	20,126	31·45	...	...	20,126	31·45	
			Total ...	1,36552	213·37	...	...	1,36,552	213·37	
Chenab	Hafizabad ...	Gujranwala	Hafizabad Protected Forests	1,04,669	163·54	81,892	...	1,86,561	291·50	Notification No. 260, dated 15th August 1887
			Total ...	1,04,669	163·54	81,892	...	1,86,561	291·50	
		Grand Total ...		2,41,221	376	81,892	...	3,23,113	505	
		Total for 1886-87 ...		2,05,494	321·08	43,358	7,631	2,41,221	376	

Abstract of changes during the year.

	Acres.
Area at commencement of year	2,41,221
Added—	
By notification	81,892
Area at close of year	3,23,113

Form No. 49.

AREA OF UNCLASSED STATE FORESTS, 1887-88.

Division	Range.	Civil District or Territory.	Name of Forest.	Area of 1st April 1887. Acres.	Area of 1st April 1887. Equivalent in square miles.	Added during the year. Acres.	Excluded or transferred to other heads. Acres.	Area of 31st March 1888. Acres.	Area of 31st March 1888. Equivalent in square miles.	No. and date of Notification of addition or transfer.
Rawalpindi	Kahuta ...	Rawalpindi	Kahuta Range Rakhs (undemarcated)	82,800	129·38	...	...	82,800	129·38	
	Murree ...	Do. ...	Murree Range Rakhs (undemarcated)	73,400	114·69	...	...	73,400	114·69	
	Attock ...	Peshawar...	Jabba Jhil ..	580	·91	...	...	580	·91	
			Total	1,56,780	244·98	...	...	1,56,780	244·98	
Chamba	River ...	Gurdaspur	Gurdaspur Rakhs ...	8,882	13·88	...	...	8,882	13·88	
			Total ...	8,882	13·88	...	...	8,882	13·88	
Kangra	Dera ...	Kangra ...	Dera Range Rakhs ...	2,03,569	318·07	...	...	2,03,569	318·07	
	Do. ...	Hoshiarpur	Hoshiarpur Rakhs ...	82,890	129·51	...	...	82,890	129·51	
	Nurpur ...	Kangra ...	Nurpur Range Rakhs ...	91,463	142·91	...	...	91,463	142·91	
			Total ...	3,77,922	590·49	...	...	3,77,922	590·49	
Kulu	Upper Kulu	Kangra ...	Upper Kulu Range ...	70,418	110·03	904	(a) ...	71,322	111·44	
	Lower Kulu	Do. ...	Lower Kulu Range ...	25,492	39·83	...	...	25,492	39·82	
	Inner Seoraj	Do. ...	Inner Seoraj Range ...	69,903	109·22	...	...	69,903	109·22	
	Outer Seoraj	Do. ...	Outer Seoraj Range ...	58,490	91·39	120	(a) ...	58,610	91·58	
	Waziri Rupi	Do. ...	Waziri Rupi Range ...	1,22,647	191·64	140	(a) ...	1,22,737	191·85	
			Lahoul ...	2,560	4·00	..	...	2,560	4·00	
			Total ...	3,49,510	546·11	1,164	...	3,50,674	547·92	
Bashahr	Kilba ...	Simla ...	Kilba ...	7,887	12·32	...	...	7,887	12·32	
	Kailas ...	,, ...	Kailas Range	5,120	8·00	9,870	(b) ...	14,990	23·42	
	Chini ...	,, ...	Chini Range...	2,560	4·00	...	...	2,560	4·00	
	Pandrabis	,, ...	Pandrabis ,, ...	3,200	5·00	17,442	(b) ...	20,642	32·26	
	Neogli ...	,, ...	Neogli ,, ...	5,120	8·00	...	...	5,120	8·00	
	Tranda ...	,, ...	Tranda ...	3,840	6·00	8,710	(b) ...	12,550	19·61	
	Pabar ...	,, ...	Pabar, Rupin and Giri Forests ..	...	...	4,530	(c) ...	4,530	7·08	Government of India No. 93 dated 23rd February 1888
			Total ...	27,727	43·32	40,552	...	68,279	106·69	
Jhelum	River ...	Gujrat ...	Belas ...	424	·66	...	1 (d)	411	64	
	Khushab ...	Shahpur...	Khushab Rakhs	1,34,824	210·66	...	...	1,34,824	210·66	
			Total ...	1,35,248	211·32	...	13	1,35,235	211·30	

(a) By correction of previous return.
(b) By re-estimation of areas.
(c) By transfer from North-Western Provinces
(d) By river action.

Form No. 40.

AREA OF UNCLASSED STATE FORESTS, 1887-88.—(concluded)

Division.	Range.	Civil District or Territory.	Name of Forest.	Area on 1st April 1887.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1888.		No. and date of Notification of addition or transfer.
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres.	Equivalent in square miles.	
Chenab.	Hafizabad...	Gujranwala	Hafizabad Rakhs ...	2,832	4·43	...	.	2,832	4·43	
	Chenab River	Do. ...	Belas ...	384	·60	76(*e*)	..	460	0 71	
	Do.	Gujrat	Do. ...	7,181	11·23	97(*e*)	19(*e*)	7,265	11·35	
	Do.	Do.	Kuthala plantation ...	15	·02	...	5(*e*)	10	0·02	
	Bhera ..	Shahpur	Bhera Rakhs...	1,42,920	223·31	...	...	142,920	223·31	
	Jhang ...	Jhang ...	Jhang Rakhs...	81,892	127·95	...	81,892(*f*)	.	...	
	Chenab River	Sialkot	Belas ...	93	·15	...	...	93	0 15	
			Total ...	2,35,323	367·69	173	81,916	1,53,580	239·97	
Lahore.	Chunian ...	Lahore ...	Chunian Rakhs	1,07,305	167·66	...	2,969(*g*)	1,04,336	163·02	
	Lahore ...	Do. ...	Lahore Rakhs	27,195	42 49	...	663(*g*) 624(*h*)	25,908	40·48	
	Do.	Do. ...	Kot Lakhhpat plantation...	600	·94	...	.	600	·94	
	Sharakpur ..	Do.	Sharakpur ...	73,231	114·42	624(*h*)	. .	73,855	115·40	
			Total ...	208,331	325 51	624	4,256	2,04,999	319 84	
Multan.	Lodhran ...	Mooltan ...	Lodhran Rakhs	21,430	33 48	...	...	21,430	33·48	
	Mailsi ...	Do. ...	Mailsi ,,	17,491	27·33	..	..	17,491	27·33	
	Sanawan ...	Muzaffargarh	Sanawan ,,	11,086	17 32	..	....	11,086	17·32	
	Muzaffargarh	Do. ...	Muzaffargarh,,	10,284	16·07	...	...	10,284	16 04	
	Alipur ...	Do. ...	Alipur ,,	27,031	42·24	...	...	27,031	42·27	
	Rajanpur ...	Dera Ghazi Khan ...	Rajanpur ,,	16,360	25·56	...	...	16,360	25·59	
	Dera Ghazi Khan ..	Do.	Dera Ghazi Khan ,,	3,000	4 69	...	...	3,000	4·69	
			Total ...	1,06,682	166·69	...	...	1,06,682	166·69	
Montgomery.	Gugera ...	Montgomery	Gugera Rakhs	2,18,467	341·36	...	500(*k*)	2,17,967	340·57	
	Montgomery	Do.	Montgomery ,,	87,120	136·12	...	...	87,120	136 12	
	Chichawatni	Do.	Chichawatni ,,	1,81,377	283·40	...	280(*k*)	1,81,097	282·96	
			Total ...	4,86,964	760·88	...	780	4,86,184	759·65	
Peshawar.	Sabathu...	Simla ...	Sabathu ...	370	·57	...	...	370	0·57	
	Dagshai ..	Do.	Dagshai ...	400	·63	..	...	400	0 63	
			Total ...	770	1 20	..	...	770	1·20	
			Grand Total	20,94,139	3,272	42,513	86,965	20,49,687	3,203	
			Total for 1886 87	17,34,076	2,709·46	4,92,582	1,32,519	20,94,139	3,272	

(*e*) By river action.
(*f*) Transferred to protected forests.
(*g*) Alienated as grants.
(*h*) 624 transferred from Lahore to Sharakpur Range Rakhs in correction of previous figures.
(*k*) Leased for cultivation.

Abstract of changes during the year.

			Acres.
Area at commencement of year...			20,94,139
Added—			
By transfer from North-Western Provinces	... 4,530		
,, correction of areas ...	. 37,186		
,, not result of river action ...	... 136		
		41,852	
Excluded—			
By transfer to Protected Forests	... 81,892		
,, grants and leases	.. 4,412	86,304	
Net reduction ...		...	44,452
Area at close of year ...		..	20,49,687

Form No. 50.

PROSECUTIONS FOR BREACHES OF FOREST RULES DURING 1887-88.

Forest Division and Civil District.	Cases pending from 1886-87.	New Cases of the Year.					Total cases.	Disposed of During the Year.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Hazara Division.														
Hazara District ...	...	21	27	1	2	51	51	44	140 and 13 villages.	6	40	50	180 and 13 villages.	1
Rawalpindi Division.														
Rawalpindi District ...	3	4	58	23	2	87	90	58	170	24	80	82	250	8
Chamba Division.														
Chamba State ...	3	6	10	10	...	26	29	17	40	1	3	18	43	11
Kangra Division.														
Kangra District ...	2	24	29	18	3	74	76	65	697	10	261	75	958	1
Hoshiarpur „ ...	2	1	12	2	2	17	19	14	29	2	6	16	35	3
Amritsar „ ...	...	1	...	...	2	3	3	3	6	..	...	3	6	...
Gurdaspur „ ...	...	...	...	...	1	1	1	1	1	...	...	1	1	...
Kulu Division.														
Kangra District ...	19	76	44	4	21	145	164	55	1,462	49	1,020	104	2,482	60
Bashahr Division.														
Simla Hill States ...	80	36	51	3	46	136	216	56	79	109	135	165	214	51
Jhelum Division.														
Jhelum District ...	1	...	30	43	5	78	79	60	144	19	46	79	190	...
Shahpur „ ...	1	...	24	22	1	47	48	37	67	9	23	46	90	2
Gujrat „ ...	...	...	1	...	...	1	1	...	...	1	1	1	1	...
Rawalpindi „ ...	1	...	1	...	1	2	3	3	4	...	...	3	4	...
Chenab Division.														
Gujranwala District ...	1	...	17	1	8	26	27	22	34	5	13	27	47	...
Gujrat „ ...	7	...	33	81	74	188	195	112	340	61	406	173	746	22
Shahpur „ ...	...	...	19	22	12	53	53	36	93	10	98	46	191	7
Jhang „ ...	1	...	3	...	...	3	4	2	2	...	...	2	2	2
Sialkot „ ...	...	...	3	4	1	8	8	4	20	2	12	6	32	2
Lahore Division.														
Lahore District ...	1	...	16	31	...	47	48	38	71	10	49	48	120	...
Amritsar „ ...	...	...	2	5	...	7	7	6	20	...	4	6	24	1
Mooltan Division.														
Mooltan District ...	8	...	23	67	1	91	99	80	121	17	45	97	166	2
Muzaffarghur „ ...	6	1	...	83	...	84	90	76	133	14	26	90	159	...
Dera Ghazi Khan „ ...	...	2	2	8	1	13	13	3	7	5	12	8	19	5
Montgomery Division.														
Montgomery District ...	186	1	109	166	...	276	462	166	272	127	304	293	576	169
Phillour Division.														
Jullundhur District ...	...	...	...	1	...	1	1	1	1	...	...	1	1	...
Simla „ ...	2	...	4	9	2	15	17	12	14	4	5	16	19	1
Umballa „ ...	...	...	2	...	...	2	2	1	3	1	1	2	4	...
Hoshiarpur „ ...	...	...	2	...	1	3	3	3	3	...	...	3	3	...
Ludhiana „ ...	...	...	1	1	...	2	2	1	2	...	...	1	2	1
Total ...	324	173	523	605	186	1,487	1,811	976	3,975 and 13 villages.	486	2,590	1,462	6 565 and 13 villages.	349
Total for 1886-87 ...	262	68	659	358	214	1,299	1,554	992	3,291	238	1,040	1,230	4,375	324

Form No. 51.

AREA OF FOREST PROTECTED FROM FIRE DURING THE DRY SEASON 1887—TO ACCOMPANY REPORT FOR 1887-88.

Division.	Forest Tracts.	Year in which protection commenced.	Area actually protected up to 15th June 1887.	During dry season of 1888.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
Hazara ...	Kaghan 2 reserves	1885	639	9,144	1	9,143	102	
	Siran 3 „ ...	...	181	7,298	.	7,298	36	
	Khanpur 21 „ ...	1885-87	13,884	...	...	...	...	
	„ 12 „ ...	...	...	11,049	30	11,919	51	
Rawalpindi ...	Murree 12 „ ...	1885	17,091	...	...	...	...	
	„ 20 „ ...	to 1888	...	27,632	193	27,439	52	
	„ 7 protected	...	4,274	...	...	...	...	
	„ 14 „ ...	...	...	11,512	3	11,509	20	
	Kahuta 10 reserves	1885	10,766	...	...	...	...	
	„ 20 „ ...	...	...	31,515	1	31,514	50	
	„ 15 protected	1888	...	12,501	..	12,501	18	
	Khairimurat ...	1886	13,775	13,775	29	13,746	86	
	Kherimar ...	...	2,241	2,261	...	2,261	49	
	Margalla ...	1887	17,901	18,930	...	18,930	96	
Chamba ...	Bakloh ...	1872	602	643	...	643	10	
	Kalatop (including Dadra),	1871	2,602	2,602	...	2,602	5	
	Kainthli ...	1888	964	964	...	964	5	
	Surkhigalli ...	1885	256	306	...	306	32	
	Bannikhet ...	1874	181	211	1	210		
	Shahpur Kandi ...	1882	8,717	8,882	...	8,882	10	
Kangra ...	Dhamtal ...	1879	624	624	...	624	15	
	Talara, Kalak, Goorial	1882	1,123	1,123	...	1,123	15	
	Mastgarh Batoola and Swarka	1885	587	587	...	587	15	
	Tatal Mehdar, Chatril and Jakar ...	1882	3,331	3,331	250	3,081	15	
	Bindraban ...	1883	597	617	...	617	14	
	Balah and Soldah ...	1887	579	579	...	579	14	
	Hathidhar ...	1885	1,100	1,500	...	1,500	15	
	Lohara Khas, Jowar, Lamba sail and part of Punjal	1875	2,000	2,000	...	2,000	32	
	Parts of Chabutra, Dhar Jakh, Humal, Bakroh, DharSidh and Majhaba	1884	7,000	7,000	...	7,000	83	
	Parts of Karnpur and Bindraban ...	1884	3,000	3,000	...	3,000	43	
Kulu ...	5 Unclassed Forests ...	1885 to 1887	1,003	1,020	...	1,020	4	
	20 Do. Do. ...	1888	...	15,083	270	14,813	12	
Bushahr	Runang ...	1886	708	...	...	...	...	
	Ralli ...	1887	...	440	...	440	26	
Chenab ...	Pabbi plantation ...	1886	681	681	...	681	10	
Mooltan ...	Lodhran Range ...	...	2,093	2,543	192	2,351	26	
	Alipur ...	...	21,856	13,994	370	13,624	34	
	Rajanpur ...	...	14,996	13,000	1,509	11,491	47	
	Muzaffargarh ...	1887	...	11,086	240	10,846	30	
Montgomery ...	Kalera ...	1884	4,561	4,561	...	4,561	52	
	Mirdad, Montgomery Ranjit Singh, Syedwala	1886	17,967	17,967	72	17,895	60	
	Satgarah ...	1887	...	2,077	...	2,077	16	
Phillour ...	Kalesar ...	1882	2,400	2,800	750	2,050	239	
	Sabathu and Jagadri ...	1887	367	370	2	368	11	
	Total ...	...	1,80,647	2,66,108	3,913	2,62,195	1,459	
	Total for 1886-87 ...		1,55,674	2,39,453	58,805	1,80 648	1,695	

Form No. 52.

AREA OF PLANTATIONS 1887-88.

Division.	Name of Plantation.	Area in Acres. On 1st April 1887.	Added during the year.	Excluded during the year.	Area on 31st March 1888.	Receipts. Of the year.	Charges. Of the year.	Remarks.
	Regular Plantations.							
Kulu	Manali Forest gardens	5	...	...	5	...	5	Unless otherwise stated, all areas excluded are failures struck off and replanted
Bashahr ...	Lee garden ...	4	...	...	4	...	114	
	Sholtu ...	6	...	...	6	...	14	
Jhelum	Pira Ghaib ...	127	16	2	141	118	243	
	Gandhala ...	27	8	2	33	...	556	
Chenab	Bolas Nath and Pindi Tatar ...	173	30	30	173	155	67	
	Bolas Sadhoki ...	1	...	...	1	2	2	
	,, Kotli Gohan ...	8	...	...	8	5	4	
	,, Thatta Faqirulla	393	...	...	393	178	...	
	,, Mohla ...	9	...	5	4	...	...	Loss by river action.
Lahore ...	Ghazi Chak ...	...	5	...	5	5	...	Transferred from "cultural operations."
	Changa Manga ...	9,080	82	82	9,080	13,578	21,638	
	Shahdera cum Jugian	1,093	20	...	1,113	17,344	178	
	Sadhanwali ...	334	...	...	334	300	...	
	Jhoke ...	956	105	47	1,014	1,655	1,326	
	Nag ...	412	...	...	412	285	12	
	Carob plantation ...	23	...	...	23	37	254	
Phillour ...	Jullundur ...	51	...	...	51	133	...	
	Phillour ...	220	...	...	220	676	233	
	Ludhiana ...	197	...	...	197	...	...	
	Sabathu ...	295	38	23	310	1,025	363	
	Jagadri ...	201	...	...	201	105	...	
	Dagshai ...	189	219	130	278	632	3,535	
	Total Regular Plantations ...	13,804	523	321	14,006	36,233	28,541	The balance on 1st April 1887 was erroneously printed 13,814.
	Cultural operations							
Hazara	Changagali, No 1 ...	44	...	...	44	...	...	
	Do. Forest house plot	6	...	...	6	...	68	
	Kujagali ...	16	...	...	16	...	...	
	Kutli ...	10	...	...	10	...	...	
	Malkandi No. 1 ...	8	...	...	8	...	...	
	Do. No 2 ...	2	...	...	2	...	...	
	Do. No 3 ...	...	40	...	40	...	156	
	Nuri ...	5	...	...	5	...	...	
	Mari ...	5	...	...	5	...	...	
	Karala ...	3	...	...	3	...	...	
	Makhanyal ...	2	...	...	2	...	...	
	Garamthan { Mela ki ochoi	47	...	...	47	...	8	
	Garamthan { Sallumar	232	...	...	232	...	20	
	Do. Kotjundan ...	132	...	...	132	...	15	
	Do. Toba Danda	5	...	...	5	...	...	
	Do. Bijumar ...	...	260	...	260	...	357	
	Tojwan (Meurti) ...	1	...	...	1	...	10	
	Shinu Nuri Khas ...							
	Bhagia, Ganda ká Nakka and Baggaban ...	16	...	...	16	...	...	
	Chambi (Sir) ...	1	...	...	1	...	...	
	Dungagali (Bagan) ...	1	...	1	...	...	...	
	Surboyla Kamalban ...	...	32	...	32	...	118	
	Tejwal (Mauji Keri)	...	9	...	9	...	92	
	8 Miscellaneous plots	...	4	...	4	...	40	
	Nurseries ...	...	...	...	...	...	321	
	Total ...	536	345	1	88	...	1,195	
Rawalpindi ...	Barakao (Margala reserve) ...	86	...	...	86	...	72	
	Pind Gondal (Do.) ...	9	...	...	9	...	...	
	Karang Nadi (Do.) ...	6	...	...	6	...	...	
	Athal (Banigala) ...	13	...	...	13	...	...	
	KhariMurat (Nos. 1 to X)	30	...	...	30	...	...	
	Kuhert a and Bariar ...	9	...	...	9	...	...	
	Patriata ...	2	...	...	2	...	1	
	Seribari (Compt No. 2)	...	...	...	...	...	54	
	Total ...	155	...	...	155	...	127	

Form No 52.

AREA OF PLANTATIONS, 1887-88.—(continued.)

Division.	Name of Plantation.	Area in Acres. On 1st April 1887.	Added during the year.	Excluded during the year.	Area on 31st March 1888.	Receipts. Of the year.	Charges Of the year.	Remarks.
	Cultural operations —continued.							
Chamba ...	Pangi various ...	26	...	...	26	...	...	
	Bassu ...	149	...	...	149	...	38	
	Dhauri ...	25	...	...	25	...	...	
	Bakloh ...	...	...	...	...	14	...	
	Kalatop ...	211	23	...	234	295	345	
	Kainthli ...	102	31	31	102	...	190	
	Majour ...	1	...	...	1	...	...	
	Cherri ...	2	...	...	2	...	...	
	Padri and Bohar ...	14	3	...	17	...	300	
	Chatri ...	4	2	...	6	...	244	
	Khanni ...	4	1	...	5	...	44	
	Sakral ...	...	...	...	...	...	23	
	Dand ...	...	...	...	...	...	247	
	Total ...	538	60	31	567	309	1,431	
Kangra ...	Chitril ...	10	56	10	56	...	42	
	Tatal ...	51	60	25	86	...	148	
	Bindraban ...	11	26	10	27	...	35	Error in return returns.
	Bhali ...	2	...	2	...	...	...	
	Dhamtal ...	14	25	15	24	...	87	
	Nahan ...	19	...	...	19	...	...	
	Jamoli ...	5	...	...	5	...	...	
	Balwal ...	5	...	...	5	...	...	
	Samlian ...	21	91	...	112	...	270	
	Tilli ...	3	1	1	3	...	6	
	Bajuri ...	6	...	...	6	...	...	
	Baldoa ...	7	...	...	7	...	...	
	Lohara ...	25	...	25	...	...	...	Error in previous retu rns
	Badiana ...	25	20	...	45	...	34	
	Chaliar ...	2	...	...	2	...	...	
	Aloh ...	1	1	...	2	...	5	
	Salaon ...	3	...	...	3	...	...	
	Mather ...	6	...	...	6	...	...	
	Paraneb ...	1	...	...	1	...	...	
	Bhsler ...	2	...	...	2	...	...	
	Madoli ...	3	...	...	3	...	...	
	Arroh ...	1	...	...	1	...	...	
	Choar ...	1	...	...	1	...	...	
	Hamirpur Forest ...	84	...	...	84	...	...	
	Bagarian and Mullunwal	555	...	25	530	479	116	Lost by river action.
	Karnpur ...	6	17	14	9	...	54	
	Bindraban ...	1	13	11	3	...	64	
	Bakarar ...	1	4	3	2	...	11	
	Mehdar ...	...	2	...	2	...	4	
	Khanni ...	...	20	20	...	...	31	
	Band Bakhshi ...	...	25	20	5	...	123	
	Darang ...	...	2	...	2	...	8	
	Habrol ...	...	8	...	8	...	18	
	Panjal ...	...	4	...	4	...	12	
	Lohara ...	...	7	...	7	...	20	
	Dharni ...	...	1	...	1	...	3	
	Bharual ...	...	1	...	1	...	3	
	Tiri ...	...	1	...	1	...	1	
	Baldoa ...	...	1	...	1	...	5	
	Total ...	871	386	181	1,076	479	1,100	
Kullu ...	Dungri ...	34	...	...	34	...	4	
	Manalghan ...	53	...	...	53	...	...	
	Dana Bial ...	27	...	...	27	...	...	
	Sial Bial ...	63	...	...	63	...	...	
	Manalgahr ...	41	...	...	41	...	...	
	Bai Padri ...	12	...	...	12	...	...	
	Dani Doo ...	30	...	...	30	...	...	
	Chasal Uppo ...	11	10	10	11	...	39	
	Po Lower ...	4	...	...	4	...	...	
	Shalingar ...	35	...	...	35	...	...	
	Carried over ...	310	10	10	310	...	43	

Form No. 52

AREA OF PLANTATIONS 1787-88—(continued.)

Division.	Name of Plantation.	Area in Acres. On 1st April 1887.	Added during the year.	Excluded during the year.	Area on 31st March 1888	Receipts. Of the year.	Charges. Of the year.	Remarks
		Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	
	Brought forward ...	310	10	10	310	...	43	
	CULTURAL OPERATIONS —continued.							
KULU ...	Dudlu ...	48	9	9	48	...	34	
	Brunudhar ...	17	10	10	17	...	26	
	Padi Chalaon ...	9	4	...	13	...	21	
	Batar Bial ...	3	...	...	3	...	...	
	Deoban ...	12	...	...	12	...	...	
	Sesni ...	3	...	...	3	...	...	
	Phetaban ...	1	...	...	1	...	...	
	Ledi Chalaon ...	2	...	...	2	...	...	
	Shejuni ...	6	...	...	6	...	2	
	Sandhar ...	5	1	1	5	...	14	
	Bindradan Sansi ...	1	...	...	1	...	...	
	Do. Jerri ...	24	...	...	24	...	...	
	Soma Chalaon ...	48	6	6	48	...	29	
	Phulga ...	12	7	4	15	...	19	
	Daogi ...	2	...	...	2	...	1	
	Latura ...	67	...	25	42	...	...	
	Blajdhar ...	9	...	...	9	...	...	
	Solano ...	7	...	...	7	...	...	
	Ramgarh ...	1	2	...	3	...	13	
	Silla ...	4	...	...	4	...	...	
	Phone ...	5	...	...	5	...	...	
	Bagi ...	2	...	2	...	...	...	
	Gogarsil ...	3	3	3	3	...	7	
	Baker Kiara ...	2	...	...	2	...	...	
	Lot ...	1	...	...	1	...	...	
	Fojal Kalaun ...	6	3	3	6	...	7	
	Kashol ...	1	...	...	1	...	...	
	Manglaur ...	1	...	...	1	...	...	
	Ratho ...	...	30	...	30	...	11	
	Kut ...	...	...	...	...	...	1	
	Total ...	612	85	73	624	...	228	
BASHAHR ...	Nachar east ...	136	7	...	143	...	102	
	Runang ...	44	1	15	30	...	4	
	Sapni and Kum Kumi	220	22	14	228	...	139	
	Kunhi ...	2	...	...	2	...	...	
	Kilba ...	7	8	...	15	...	247	
	Dorkali and Kashapat	2	2	...	4	...	42	
	Taranda ...	5	1	2	4	...	1	
	Gutrang ...	12	...	...	12	...	...	
	Nachar west ...	5	...	...	5	...	...	
	Tanglang ...	8	...	...	8	...	...	
	Jani ...	6	4	...	10	...	25	
	Panwi ...	9	...	...	9	...	...	
	Kulba ...	2	...	...	2	...	...	
	Ramni ...	...	...	...	...	...	1	
	Junpan-Phinla ...	...	13	—	13	...	50	
	Tikru-Wasankan ...	...	7	...	7	...	26	
	Punang ...	...	1	..	1	...	12	
	Taklech ...	...	...	...	...	...	31	
	Bannoli ...	...	1	...	1	...	67	
	Ralli ...	...	1	...	1	...	8	
	Total ...	458	68	31	495	...	815	
JHELUM ...	Ban Faqirulla ...	3	1	2	2	...	136	One acre shown erroneously in previous returns.
	Garat ...	2	3	...	5	...	48	
	Total ...	5	4	2	7	...	184	
CHENAB ...	Pabbi ...	681	100	...	781	335	1399	
	Kikranwali ...	2	...	...	2	...	14	
	Chichra ...	5	1	...	6	...	54	
	Ghazi Chak ...	5	...	5	...	...	...	Transferred to Regular Plantations.
	Gujranwalla nursery ...	1	...	1	...	...	12	
	Tibbi Tarar ...	2	...	...	2	...	...	
	Gujranwalla Rakhs ...	3	...	...	3	...	27	
	Wazirabad nursery ...	...	...	...	...	...		
	Ishar ...	...	25	...	25	...	689	
	Deowul ...	...	25	...	25	...		
	Total ...	699	151	6	844	335	2,105	

Form No. 52.

AREA OF PLANTATIONS, 1887-88.—(concluded.)

DIVISION.	Name of Plantation.	Area in Acres. On 1st April 1887.	Added during the year	Excluded during the year.	Area on 31st March 1888.	Receipts. Of the year.	Charges. Of the year.	Remarks
	Cultural Operations.—*concluded.*							
Lahore ...	Kot Lakhpat ...	200	58	38	220	520	548	
	Dhig ..	45	184	184	45	...	1,009	
	Chandra ...	...	...	...	...	...	3	
	Kot Karor ..	...	...	...	...	...	1	
	Gandian ...	...	...	...	...	...	1	
	Mundoki ...	..	...	...	...	...	1	
	Jalleki ...	...	...	...	...	...	7	
	Chunian ...	...	...	...	...	...	2	
	Total ...	245	242	222	265	529	1,572	
Mooltan ...	Makhan Bela ...	...	2	1	1	...	20	
	Chak Kaora ...	5	...	5	...	...	...	
	Makhdumpur ..	5	250	150	105	...	252	
	Vinoi ...	35	330	110	255	...	308	
	Nauraja Bhuta ...	...	24	16	8	...	123	
	Fazilpur, &c. ...	...	7	7	...	...	29	
	Dhamerwala ...	...	6	5	1	...	6	
	Kureshi ...	...	25	...	25	...	28	
	Jalwalla ...	...	1	...	1	...	12	
	Dangra ...	...	90	90	...	...	12	
	Total ...	45	735	384	396	...	790	
Montgomery ...	Okara Reserve ...	22	3	3	22	...	6	
	Satghara „ ...	2	3	3	2	...	7	
	Montgomery „ ...	1	5	6	...	..	5	
	Muhamadpur „ ...	1	4	5	...	...	7	
	Ranjit Singh „ ...	1	3	4	...	...	2	
	Kalera ...	1	3	4	...	...	2	
	Experiments in Okara, Montgomery, Muhammadpur and Darsana	...	...	...	...	...	5	
	Total ...	28	21	25	24	...	34	
	Total of cultural operations for the Province	4,192	2,097	956	5,333	1,652	9,671	Fractions amounting to 1¼ acres shown in closing balance of last year have now been omitted.
	Grand Total of Plantations and cultural operations ...	17,996	2,620	1,277	19,339	37,855	38,212	

ABSTRACT OF CHARGES.

				Rs.
	Cost of Regular Plantations		28,541	
	Cost of cultural operations		9,671	
				38,212
Add—				
	Cost of collection of seed in Rawalpindi, Chamba, Kangra and Mooltan Divisions...		360	
	Salary, &c., of temporary forester		73	
				433
			Total ...	38,645
Deduct—				
	Expenditure debited to AVIII*f* in Hazara, Rawalpindi, Kulu, Jhelum, Bashahr and Chenab Divisions		138	
	Expenditure debited to AVIIIein Chenab Division ...		39	
	Erroneously charged to BIIc in Kulu...		28	
				205
	Expenditure under AVIII*d* as per form 58			38,440

ABSTRACT OF CHANGES IN AREA OF PLANTATIONS.

				Acres.
	Total plantations of all classes on 1st April 1887			17,996
Add—				
	Work actually done during the year	2,615		
	By transfer from cultural operations	5	2,620	
Deduct—				
	Failures struck off	1,214		
	Lost by river action	30		
	Corrections of area	28		
	By transfer to Regular Plantations	5		
			1,277	
		Net Addition	...	1,343
	Total of all classes on 31st March 1888 ...			19,339

Form No. 53.

TREES FELLED OR GIRDLED BY GOVERNMENT AGENCY DURING THE YEAR 1887-88-(SELECTION FELLINGS).

Division.	Trees felled or girdled.		Remarks.
	Description.	Number.	
Hazara ...	Deodar (*Cedrus Deodara*)	412	
	Paludar (*Abies Webbiana*)	74	
	Biar (*Pinus excelsa*)	222	
	Chil (*Pinus longifolia*)	21	
	Rhin (*Quercus incana*)	61	
	Walnut	1	
	Total ...	791	
Rawalpindi ...	Chil (*Pinus longifolia*)	80	
	Rhin (*Quercus incana*)	72	
	Barungi (*Quercus dilatata*)	16	
	Other trees	35	
	Total ...	203	
Chamba ...	Deodar (*Cedrus Deodara*)	3,508	
	Pines	329	
	Total ...	3,837	
Kulu ...	Deodar (*Cedrus Deodara*)	555	
	Kail (*Pinus excelsa*)	199	
	Devidiar (*Juniperus excelsa*) ...	2	
	Total ...	756	
Bashahr ...	Deodar (*Cedrus Deodara*)	2,028	
	Blue Pine (*Pinus excelsa*)	55	
	Total ...	2,083	
Jhelum ...	Olive (*Olea cuspidata*)	624	
	Total ...	624	
	Grand Total ...	8,294	
	ABSTRACT.		
	Deodar	6,503	
	Other conifers	982	
	Oak	149	
	Other trees	660	
	Total ...	8,294	
	Total for 1886-87 ...	11,804	

Form No. 54

OUTTURN OF TIMBER AND FIREWOOD DURING THE YEAR 1887-88.

Division.	Description of materials.	OUTTURN IN CUBIC FEET.								Remarks.
		Selection fellings.	Clearances.	Thinnings.	Total.	Removed by Government agency.	Purchasers.	Free grants.	Right-holders.	
				RESERVED FORESTS						
Hazara ...	Deodar logs ..	84,550	...	...	84,550	84,550	...	..	...	
	Pine " ...	5,678	...	..	5,678	5,678	...	...	...	
	Pine and other Scantlings ...	23,340	...	..	23,340	23,340	...	...	..	
	" " Shingles ...	1,889	...	...	1,889	1,889	...	...	...	
	Biar Dhujjies ...	636	...	...	636	636	...	...	...	
	Firewood (stacked) ...	...	3,68,575	...	3,68,575	59,225	2,59,350	...	50,000	Estimated quantity collected on 2,545 acres open to Settlement rights.
	Charcoal ...	25,788	...	...	25,788	25,788	...	...	...	
Rawalpindi ...	Pine and other trees ...	39,490	...	...	39,490	160	39,330	...	...	
	Miscellaneous pieces ...	1,225	...	...	1,225	...	1,225	...	...	
	Pine and other trees ...	23,860	...	..	23,860	...	23,860	...	...	
	Firewood (stacked) ...	3,30,514	73,269	6,81,000	10,84,783	6,517	3,97,266	..	6,81,000	
	Charcoal ...	1,15,520	...	...	1,15,520	1,15,520	...	...	...	
	Poles ...	1,220	...	...	1,220	...	1,220	...	...	
Chamba ...	Deodar logs ...	1,79,880	...	52,190	2,32,070	2,32,070	...	...	...	
	Pine logs ...	18,060	...	120	18,180	18,180	...	...	...	
	Deodar Sleepers B. G. ...	1,58,543	...	30,768	1,89,311	1,89,311	...	...	...	
	Deodar Scantlings ...	4,332	...	...	4,332	4,332	...	...	...	
	Pine " ...	6,415	...	...	6,415	6,415	...	...	...	
	Deodar trees ...	...	...	4,015	4,015	...	...	...	4,015	
	Pine and other trees ...	...	...	23,950	23,950	...	18,000	...	5,950	
	Firewood (solid) ...	...	...	13,22	1,322	...	1,322	...	...	
	labs ...	2,205	...	...	2,205	2,205	...	...	...	
Kangra ...	Pine and other trees ...	34,056	970	...	35,026	...	35,026	...	...	
	Firewood (solid) ...	5,390	...	...	5,390	...	5,390	...	...	
Bashahr ...	Deodar logs ...	2,59,138	...	...	2,59,138	2,59,138	...	...	...	
	Pine " ...	17,738	...	...	17,738	7,088	10,650	...	...	
	Deodar B. G. Sleepers ...	26,861	...	...	26,861	26,861	...	...	...	
	" N. G. " ...	913	...	...	913	913	...	...	...	

Jhelum	Olive trees	200	...	...	200	200	...	...	...
	Firewood (stacked)	...	...	3,52,486	3,52,486	...	12,598	51,684	2,88,204
Chenab	Ditto	...	2,943	...	2,943	...	2,943	...	...
Lahore	Ditto	...	9,76,243	1,49,258	11,25,501	11,20,531	4,970	...	...
	Miscellaneous trees (stacked) ...	...	587	132	719	587	132	...	...
Multan	Firewood (stacked)	...	17,88,274	...	17,88,274	1,63,865	16,24,409	...	...
	Poles	...	506	...	506	...	506	...	...
Montgomery ...	Firewood (stacked)	...	22,84,210	...	22,84,210	...	22,84,210	...	...
Phillour	Tors and Ballas (sal)	64	...	...	64	64	...	...	...
	Firewood (solid)	1,852	...	606	2,458	198	2,260	...	...
	Total from Reserved Forests ...	13,69,357	54,95,577	12,95,847	81,60,781	23,55,261	47,24,667	51,684	10,29,169
	PROTECTED FORESTS.								
Rawalpindi... ...	Pine and other trees	97,965	...	...	97,965	...	97,965	...	...
	Firewood (stacked)	8,484	15,884	...	24,368	...	24,368	...	...
	Charcoal	320	...	...	320	320	...	...	...
	Poles	150	...	...	150	...	150	...	...
Chenab	Firewood (stacked)	...	2,44,552	...	2,44,552	19,000	2,25,552	...	...
	Total from Protected Forests ...	1,06,919	2,60,436	...	3,67,355	19,320	3,48,035	...	...
	UNCLASSED STATE FORESTS.								
Rawalpindi ...	Pine and other trees	1,13,757	...	...	1,13,757	...	...	...	1,13,757
	Poles	59,627	...	...	59,627	...	...	...	59,627
	Firewood (stacked)	...	...	95,24,900	95,24,900	...	...	...	95,24,900
Chamba	Pine trees	...	...	2,400	2,400	...	2,400	...	...
	Firewood (solid)	...	...	640	640	...	640	...	...
Kangra	Pine and other trees	2,64,065	...	...	2,64,065	240	84,029	...	1,79,796
	Firewood (solid)	16,362	...	...	16,362	...	5,460	...	10,902
Kulu	B. G. Sleeper (Deodar)	48,198	...	...	48,198	48,198	...	...	...
	N. G. sleeper (,,)	1,337	...	...	1,337	1,337	...	...	...
	Logs (,,)	62,654	...	...	62,654	61,438	1,152	64	...
	Trees (,,)	53,988	...	...	53,988	...	9,270	25,853	18,865
	Pine and other trees	30,28,263	...	...	30,28,263	...	3,240	17,560	30,07,463
	Pine and other logs	34,002	...	...	34,002	32,690	1,312	...	...
	Pencil cedar	381	...	...	381	381	...	...	...
	Firewood	...	...	120,00,000	120,00,000	...	...	...	120,00,000

Of the estimated consumption by right-holders of 240 lakhs cubic feet. of firewood, one-half only, or about 120 lakhs has been included in this return. It has been assumed that the remainder was obtained from land not included in form No. 49.

[MAY 1

Form No. 54.

OUTTURN OF TIMBER AND FIREWOOD, DURING THE YEAR 1887-88.—(concluded.)

Division.	Description of materials.	OUTTURN IN CUBIC FEET.								Remarks.
		Selection fellings.	Clearances.	Thinnings.	Total.	Removed by: Government Agency.	Removed by: Purchasers.	Removed by: Free grants.	Removed by: Right holders.	
Bashahr ...	Deodar trees ...	24,770	...	...	24,770	...	...	24,770	...	
	Pine and other trees ...	5,04,650	...	...	5,04,650	...	...	5,04,650	...	
	Firewood ...	...	11,25,000	...	11,25,000	...	...	...	11,25,000	
Jhelum ...	„ (stacked) ...	...	...	14,83,162	14,83,162	...	3,379	20,148	14,59,635	
Chenab ...	„ „ ...	...	3,34,335	...	3,34,335	3,00,250	34,085	...	...	
	„ „ ...	...	19,242	2,602	21,844	2,567	35	19,242	...	
Lahore ...	Trees (stacked) ...	...	...	4,050	4,050	...	4,050	...	...	
Mooltan ...	Firewood (stacked) ...	...	73,974	...	73,974	27,200	46,774	...	...	
	Poles ...	...	7,705	...	7,705	...	7,705	...	...	
Montgomery ...	Firewood (stacked) ...	...	3,72,954	...	3,72,954	...	3,72,954	...	...	
	Trees ...	...	375	...	375	...	375	...	...	
	Karil Rafters ...	...	1,005	...	1,005	...	1,005	...	...	
Phillour ...	Firewood (solid) ...	...	17	...	17	17	...	...	...	
	Chil pieces ...	...	6	...	6	...	6	...	...	
	Total from Unclassed Forests ...	42,12,054	19,34,613	230,17,754	291,64,421	4,74,318	5,77,871	6,12,287	274,99,945	
	Guzara Forests (not on Books of Forest Department).									
Hazara ...	Deodar logs ...	5,586	...	...	5,586	5,586	...	...	...	147 logs at 38 cubic feet.
	„ sleepers ...	7,253	...	...	7,253	7,253	...	...	...	2073 B. G. sleepers.
	„ scantlings ...	104	...	...	104	104	...	...	...	60 pieces.
	Total from Guzaras ...	12,943	...	...	12,943	12,943	...	...	...	
	Total from Unclassed Forests and Guzaras.	42,24,997	19,34,613	230,17,754	291,77,364	4,87,261	5,77,871	6,12,287	274,99,945	
	Grand total for Forests of all classes.	57,01,273	76,90,626	243,13,601	377,05,500	28,61,842	56,50,573	6,63,971	285,29,114	

Abstract for Reserved Forests.

Deodar trees	...	...	...	4,015	4,015	...	...	...	4,015
„ logs	...	5,23,568	...	52,190	5,75,758	5,75,758	...	...	...
„ B. G. sleepers	...	1,85,404	...	30,768	2,16,172	2,16,172	...	...	...
„ N. G. sleepers	...	913	...	...	913	913	...	...	...
„ Scantlings	...	4,332	...	...	4,332	4,332	...	...	...
Pine and other logs	...	41,476	...	120	41,596	30,946	10,650	...	...
„ scantlings	...	29,755	...	...	29,755	29,755	...	...	...
„ sleepers	...	1,889	...	...	1,889	1,889	...	...	...
Miscellaneous trees	...	97,606	1,557	24,082	1,23,245	947	1,16,348	...	5,950
„ poles and ballas	...	1,284	506	...	1,790	64	1,726	...	...
„ slabs and pieces	...	4,066	...	...	4,066	2,841	1,225	...	...
	...	3,37,756	54,93,514	11,84,672	70,15,942	13,50,336	45,94,718	51,684	10,19,204
	...	1,41,308	...	...	1,41,308	1,41,308	...	...	...
Total	...	13,69,357	54,95,577	12,95,847	81,60,781	23,55,261	47,24,667	51,684	10,29,169

Abstract for Protected Forests.

Miscellaneous trees	...	97,965	...	...	97,965	...	97,965	...	...
„ poles	...	150	...	...	150	...	150	...	...
Firewood	...	8,484	2,60,436	...	2,68,920	19,000	2,49,920	...	...
Charcoal	...	320	...	...	320	320	...	...	...
Total	...	1,06,919	2,60,436	...	3,67,355	19,320	3,48,035	...	...

Abstract for Unclassed State Forests

Deodar trees	...	78,758	...	...	78,758	...	9,270	50,623	18,865
„ logs	...	68,240	...	...	68,240	67,024	1,152	64	...
„ scantlings	...	104	...	...	104	104	...	...	...
„ B. G. sleepers	...	55,451	...	...	55,451	55,451	...	...	...
„ N. G. sleepers	...	1,337	...	...	1,337	1,337	...	...	...
Pine and Miscellaneous trees	...	39,11,116	375	6,450	39,17,941	621	94,094	5,22,210	33,01,016
„ „ poles	...	59,627	7,705	...	67,332	...	7,705	...	59,627
„ „ logs	...	34,002	...	...	34,002	32,690	1,312	...	...
„ „ pieces	...	...	1,011	...	1,011	...	1,011	...	...
Firewood	...	16,362	19,25,522	230,11,304	249,53,188	3,30,034	4,63,327	39 390	241,20,437
Total	...	42,24,997	19,34,613	230,17,754	291,77,364	4,87,261	5,77,871	6.12,287	274,99,945
GRAND TOTAL	...	57,01,273	76,90,626	243,13,601	377,05,500	28,61,842	56,50,573	6.63.971	285,29,114
TOTAL FOR 1886-87	...	33,24,256	88,85,880	104,42,098	226,52,234	32,86,656	79,41,370	101,18,583	13,05,625

Form No. 55.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1887-88

Division.	Description of produce.	Produce removed or utilized.										Remarks.
		By Government Agency.		By Purchasers.		By free grants.		By Right-holders.		Total.		
		Quantity.	Value	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
	RESERVED FORESTS.											
Hazara	Grazing by leases (acres)	...	...	35,402	1,232	...	...	...	...	35,402	1,232	
	„ by settlement (acres)	...	...	...	...	...	...	7,510	235	7,510	235	
	„ by permit (No. of cattle)	...	...	1,148	152	...	...	...	...	1,148	152	
	Grass cutting by lease (acres)	...	...	55,550	4,009	...	...	...	...	55,550	4,009	
	„ by permits (loads)	...	...	46,244	1,938	...	...	...	...	46,244	1,938	
	„ „ (men)	...	...	94	241	...	...	...	...	94	241	
	„ by settlement (acres)	...	...	...	...	...	...	5,984	499	5,984	499	
	Leaf-fodder „ (acres)	...	...	...	...	...	...	446	50	446	50	
	Turpentine (maunds)	17	102	...	...	...	...	...	...	17	102	
	Chir bark („)	...	...	198	99	...	...	...	...	198	99	
	Imli and Bhan leaves (loads)	...	...	290	72	...	...	...	...	290	72	
	Other minor produce	...	8	...	2	...	...	...	...	...	10	
Rawalpindi	Grazing by permits (acres)	...	...	14,161	256	...	...	...	...	14,161	256	
	„ and grass cutting (acres)	...	...	...	...	...	...	33,249	20,000	33,249	20,000	
	Grass cutting leases (acres)	...	...	13,038	985	...	...	...	...	13,038	985	
	„ (maunds)	...	...	10,792	169	...	...	...	...	10,792	169	
	„ by permits (loads)	...	...	28,436	458	...	...	...	...	28,436	458	Various loads.
	Bamboos (No.)	...	...	1,000	50	...	...	...	...	1,000	50	
	Sanatha (loads)	...	...	1,244	238	...	...	...	...	1,964	238	
	Aola leaves (loads)	...	...	964	61	...	...	...	...	244	61	
	Babar grass (maunds)	...	...	414	27	...	...	...	...	414	27	
	Other minor produce	...	...	...	26	...	...	...	...	...	26	
Chamba	Grass (head loads)	...	...	9,504	297	...	...	...	...	9,504	297	
	Deodar seedlings (No.)	...	...	192	12	...	...	...	...	192	12	

KANGRA ...	Grazing by permits (acres)	...	...	...	...	1,679	142	...	...	...	...	1,679	142		
	Grass cutting " "	...	...	...	...	11,430	1.800	...	...	...	...	11,430	1 800		
	Bamboos ...	...	...	6,29,500	11,481	2,166	22	...	...	...	...	6,31.666	11,503		
	Other minor produce ...	...	...	...	...	...	49	...	...	...	...	...	49		
JHELUM ...	Grazing by lease (acres)	...	...	...	...	83,235	2,666	...	...	...	...	83,235	2,666		
	Do (head of cattle)	...	...	...	...	...	...	34	3	15,168	1.253	15,202	1,256		
	Do by permits (permits)	...	...	...	...	2.410	2,209	...	...	...	...	2.410	2.209		
	Grass cutting by lease (acres)	...	...	...	...	92.225	2.407	...	...	...	...	92.225	2,407		
	Do by permits (permits)	...	...	...	...	1,529	1,120	...	...	...	...	1,529	1,120		
	Do by (head loads)	...	...	...	...	...	...	10,220	218	...	...	10,220	218		
	Grass by auction (maunds)	...	...	...	...	35	13	...	...	...	...	35	13		
	Kahi by leases "	...	...	...	...	1,000	100	...	...	...	...	1,000	100		
	Stone cft. ...	...	...	...	...	22.000	55	18,90.305	4,726	...	...	19,12.305	4,781		
	Hay (maunds) ...	...	...	1.076	359	...	...	...	...	...	...	1,076	359		
	Other minor produce ...	...	...	...	...	...	33	...	...	...	...	...	33		
CHENAB ...	Grazing by leases (acres)	...	...	...	...	27,584	8 647	...	...	...	...	27,584	8.647		
	Do by permits (cattle)	...	...	...	...	20.441	5.881	...	...	...	...	20.441	5,881		
	Hay (maunds) ...	...	...	1,079	358	...	...	...	...	...	...	1.079	358		
	Grass cutting (acres) ...	...	...	...	...	2.179	821	...	...	...	...	2,179	821		
	Do by permits (loads) ...	...	...	...	...	7,480	501	...	...	...	...	7,480	501		
	Kahi, Moonj Dab, &c...	...	...	...	...	...	463	...	...	...	...	...	463		
LAHORE ...	Grass by permits (maunds)	...	...	...	...	15,150	803	...	...	...	...	15.150	803		
	Grass cutting by lease (acres)	...	...	...	...	4,853	614	...	...	...	...	4.853	C14		
	Grazing by permits (acres)	...	...	...	...	6,654	1,991	...	...	...	...	6,654	1,991		
	Do by lease (acres)	...	...	...	...	5,333	1.191	...	...	...	...	5,333	1,191		
	Moonj Kana cutting by lease	...	...	...	...	...	1,131	...	...	...	...	...	1.131		
	Kana-reeds by permits (maunds)	...	...	...	...	964	80	...	...	...	...	964	80		
	Pilchi-cutting by lease...	...	...	...	...	...	10	...	...	...	...	...	10		
MULTAN ...	Grass (maunds) ...	...	...	1.588	458	...	...	...	...	...	...	1,588	458		
	Do (loads) ...	...	...	...	...	1,312	183	...	...	...	...	1,312	183		
	Grazing by permits (No. of cattle)	...	...	...	...	8.771	1,916	...	...	...	...	8,771	1,916		
	Moonj Kana ...	...	...	...	...	...	75	...	...	...	...	...	75		
	Pilloo fruits ...	...	...	...	...	...	8	...	...	...	...	...	8		
MONTGOMERY ...	Grazing (acres) ...	...	...	...	...	16,423	1,772	...	...	...	...	16.423	1,772		
	Grass (maunds) ...	...	...	...	...	5,358	694	...	...	...	...	5,358	694		
	Do (loads) ...	...	...	...	...	742	878	...	...	...	...	742	878	Donkey loads = 115	
	Moonj Kana ...	...	...	...	...	...	342	...	...	...	...	...	342	Pony " = 6½	
	Mala Patra ...	...	...	...	...	...	27	...	...	...	...	...	27	Head " = 620½	
PHILLOUR ...	Bamboos (No.) ...	...	...	...	...	5,160	40	...	...	...	...	5.160	40		
	Grass cutting by lease (acres)	...	...	...	...	3,032	983	...	...	...	...	3,032	983		
	Grazing (No. of cattle)	...	...	...	...	157	52	...	...	...	...	157	52		
	Grass (head loads) ...	...	...	...	...	407	16	...	...	...	...	407	16		
	Do (cart loads) ...	...	...	...	...	129	66	...	...	...	...	129	66		
	Total from Reserved Forests	...	...	12,766	...	50,125	...	4,947	...	22,037	...	...	89,875		
							Protected Forests.								
RAWALPINDI ...	Grazing by permits (acres) ...	...	...	...	...	8,080	157	...	...	...	...	8,080	157		
	Grazing and grass cutting (acres) ...	...	...	...	...	...	...	...	...	43,308	10,000	43.308	10,000		
	Sanatha and Pattaki branches (No.)	...	...	...	...	2,537	23	...	...	...	...	2,537	23		
	Bhabar grass (maunds) ...	...	...	...	...	84	4	...	...	...	...	84	4		
	Oula leaves (loads) ...	...	...	...	...	158	52	...	...	...	...	158	52		
	Other minor produce ...	...	...	...	...	...	8	...	...	...	...	...	8		

Form No. 55.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1887-88—(continued.)

Division.	Description of produce.	Produce removed or utilized.										Remarks
		By Government Agency.		*By Purchasers.*		*By free grants.*		*By Right-holders.*		*Total.*		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
Chenab ...	Grazing by lease (acres) ...	...	...	1,90,635	47,424	...	...	...	...	1,90,635	47,424	
	Kunkar (cft.)	...	...	8,500	22	...	...	...	...	85,00	22	
	Stone (cft.)	...	...	29,254	131	...	...	...	...	29,254	131	
	Total from Protected Forests ...	...	...	...	47,821	...	...	...	10,000	...	57,821	
		Unclassed State Forests.										
Rawalpindi ...	Grass cutting by leases (acres)	...	...	580	1,100	..	...	...	...	580	1,100	
	Sanatha (loads)	...	...	...	...	..	...	1,331	83	1,331	83	
	Bamboos	37,240	1,085	4,469	18	...	...	...	...	41,709	1,103	
Kangra ...	Grass cutting by permits (acres)	...	...	2,133	452	...	...	...	...	2,133	452	
	Grazing by permits (acres)	..	...	1,54,000	3,356	...	...	...	...	1,54,000	3,356	
	Other minor produce	...	...	...	18	...	...	...	...	...	18	
Kullu ...	Grass	...	...	...	3	...	...	26.50,000	1,32.500	26.50.000	1,32.503	@ 20 Mds = Re. 1.
	Grazing (heads, cattle, sheep and goats) ...	...	...	16,350	102	...	...	2,96,000	4.625	3,12,350	4,727	@ 64 „ = „ 1
	Vegetables (mould)	...	...	...	...	...	...	12,07,575	24.000	12,07,575	24,000	@ 50 „ = „ 1
	Pates (aconite)	...	..	...	...	...	...	40	1.000	40	1,000	
	Karu (gentian)	...	...	...	...	...	...	200	700	200	700	
	Egilbir	...	...	...	...	...	...	20	160	20	160	
	Dhup (*juniper communis*)	...	...	...	...	...	...	60	135	60	135	
	Khut (*Aucklandia*)	...	...	...	...	...	...	30	450	30	450	
	Nihani (*Valariana*)	...	...	...	...	...	...	10	40	10	40	
	Istakbar (*Horse chestnut*)	...	...	...	...	...	...	22	82	22	82	
	Binafsha (*Viola serpens*)	...	...	...	...	...	...	18	720	18	720	
Bashahr ...	Crude turpentine (maunds)	13	63	...	...	...	...	...	...	13	63	
	Grass and other fodder (maunds) ...	...	...	...	...	...	...	20,88,289	10,876	20 88,289	10 876	
	Branches, &c. for manure (maunds) ...	...	...	...	...	..	...	3,60,000	3,750	3,60,000	3,750	
	Honey (maunds)	...	...	...	...	...	...	40	240	40	240	
Jhelum ...	Grazing by leases (acres)	...	...	1,31,566	3,208	..	...	...	...	1,31.566	3,208	
	„ heads of cattle	...	...	...	...	146	14	27,528	1,877	27,674	1,891	
	Other minor produce	...	...	...	13	...	1	...	...	...	14	

CHENAB ...	Grazing by lease (acres)	...	...	...	1,17,439	29,632	...	...	...	...	1,17,439	29,632	
	,, by permits (cattle)	...	...	...	6,618	3,490	...	...	...	...	6,618	3,490	
	Grass-cutting (acres)	...	...	...	13,598	1,135	...	...	...	...	13,598	1,135	
	Pilchi, Khai, &c.	...	...	...	...	15	...	...	...	...	...	15	
LAHORE ...	Grass (maunds)	3,718	363	...	...	...	...	...	...	...	3,718	363	
	,, by permits (maunds)...	...	...	1,260	102	...	...	...	...	...	1,260	102	
	Grass-cutting by lease (acres)	...	...	5,564	1,270	...	...	...	...	...	5,564	1,270	
	Grazing by permit (acres)	...	...	1,53 727	19,446	...	...	...	...	...	1,53,727	19.446	
	,, by lease (acres)	...	...	18,692	2,575	...	...	...	...	...	18,692	2,575	
	Grazing (acres)	...	...	...	...	1,127	198	...	...	...	1,127	198	By Mahant of Bhai Phera.
	Munj-Kana; cutting by lease	...	...	...	1,200	...	...	...	...	...	...	1,200	
	Kankar	...	...	...	16	...	...	...	...	...	...	16	
MULTAN ...	Grazing (No. of cattle)	...	...	...	10,802	1,181	...	...	...	...	10,802	1,181	
	,, by lease (acres)	...	...	...	78,555	4,376	...	...	...	...	78,555	4,376	
	Munj-Kana	...	...	...	...	179	...	...	...	...	...	179	
	Sajji, Dates and Fishing	...	...	...	...	40	...	...	...	...	...	40	
MONTGOMERY ...	Grazing (acres)	...	...	...	4,87,764	29,182	...	...	...	...	4,87,764	29,182	
	Main	...	...	...	...	722	...	...	...	...	...	722	
	Other minor produce	...	...	...	...	66	...	...	...	...	...	66	
PHILLOUR ...	Grazing by permits (acres)...	...	...	...	1,304	117	...	...	...	...	1,304	117	
	,, (No. of cattle)	...	...	...	78	74	...	...	...	...	78	74	
	Grass-cutting by lease (acres)	...	...	...	710	1,538	...	...	...	...	710	1,538	
	,, by permits (permits)	...	...	...	30	41	...	..	...	...	30	41	
		...	1,511	...	1,04,667	...	213	...	1 81,238	...	2,87,629		
	Abstract for Reserved Forests.												
	Grazing	...	...	...	28.212	...	3	...	21,488	...	49.703		
	Grass and hay	...	1,175	...	18,996	..	218	...	...	...	20,389		
	Bamboos	...	11,481	...	112	...	...	...	...	...	11,593		
	Other minor produce	...	110	...	2,805	...	4,726	...	549	...	8,190		
	Total	...	12,766	...	50,125	...	4,947	...	22,037	...	89,875		
	Abstract for Protected Forests.												
	Grazing	...	...	...	47,581	...	...	...	10,000	...	57,581		
	Other minor produce	...	...	...	240	...	...	...	...	...	240		
	Total	...	...	...	47,821	...	...	...	10,000	....	57,821		

[MM.]

Form No. 55.

OUTTURN OF MINOR FOREST PRODUCE DURING THE YEAR 1887-88—(concluded.)

Division.	Description of produce.	Produce removed or utilized.										Remarks.
		By Government agency.		*By purchasers.*		*By free grants.*		*By Right-Holders.*		*Total.*		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
			Rs.		Rs.		Rs.		Rs.		Rs.	
	Abstract for Unclassed State Forests.											
	Grazing	...	...	...	96,739	...	212	...	6.502	...	1.03,453	
	Grass	...	363	...	5.641	...	...	...	1,43,376	...	1,49.380	
	Bamboos	...	1,085	...	18	...	...	...	...	...	1,103	
	Other miner produce	...	63	...	2.269	...	1	...	31,360	...	33,693	
		...	1,511	...	1.04.667	...	213	...	1,81,238	...	2.87.629	
	GRAND TOTAL ...	...	14.277	...	2,02,613	...	5,160	...	2,13.275	...	4,35,325	

Add—

				Rs.	Rs.
Hazara	Division.—	Outstandings of former years	...	25	4,35 325
Rawalpindi	Do.	ditto	...	62	
Chamba	Do.	Bamboos bought and resold	...	37	
Jhelam	Do.	Outstanding of former years	...	49	
,,	Do.	Grass sales (stock of 1886-87)	...	888	
Phillour	Do.	Bamboos bought and resold	...	249	
					1,310
Deduct—Hazara	Do.	Value of turpentine unsold	...	45	
,,	Do.	Outstandings 1887-88	...	20	
Jhelam	Do.	Value of grass unsold	...	359	
		Total under "Free Grants" and "Right-holders"	...	2 18,435	
					2,18,859
		Net Deduction			2,17,549
		Total receipts under Ic. Ie. IIc. IId. IIe			2,17 776

Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPOTS OR SOLD LOCALLY DURING THE YEAR 1887-88.

Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.	Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
TIMBER.									
Balance in hand at commencement of the year.					Removed by purchasers from Depots.				
Chamba Division.					Deodar logs ...	14,472	3,10,129		
Deodar logs ...	26	730			„ scantlings	6,116	6,409		
„ scantlings	6,150	5,779			B. G. sleepers ...	7,194	25,142		
B. G. Sleepers ...	397	1,104			N. G. „ ...	6,240	10,821		
Pine logs ...	753	22,667			Pine „ ...	14	46		
„ and other scantlings ...	1,091	946			Box-wood logs ...	243	134		
			8,417	31,226	Pine and other logs	2,307	49,822		
					Pine and other scantlings ...	14,619	17,916		
Kangra Division.					Double sleepers ...	6	37		
Deodar logs ...	625	23,069			Miscellaneous pieces	7,266	17,532		
N. G. sleepers ...	6,954	13,017						58,477	4,67,988
Box-wood logs ...	10	6			Used by Department from Depots				
Pine and other logs	10	185			Deodar logs ...	20	981		
Other scantlings ...	84	188			„ scantlings ...	508	552		
Miscellaneous pieces	94	77			B. G. sleepers ...	26	90		
			7,777	36,542	N. G. „ ...	1	2		
Bashahr Division.					Pine logs ...	4	79		
Deodar scantlings	408	470			„ and other scantlings ...	474	420		
Box-wood logs ...	7,423	4,644			Miscellaneous pieces	271	578		
			7,831	5,114				1,304	2,702
Jhelum Division.					Returned to owners.				
Deodar logs ...	52	2,959			Deodar logs ...	1	13		
„ scantlings (double sleepers)	6	37						1	13
B. G. sleepers ...	65	228			Transferred to Sale Depots.				
Pine logs ...	3	95			Deodar logs ...	393	15,328		
Shisham pieces ...	2	3			B. G. sleepers ...	3	10		
			128	3,322	Box-wood logs ...	25	14		
Chenab Division.					Pine and other logs	5	67		
B. G. sleepers ...	3	9			Miscellaneous pieces ...	100	200		
			3	9				526	15,619
Mooltan Division.					Transferred to other classes.				
Deodar logs ...	1	8			Deodar logs ...	1	11		
			1	8	Miscellaneous pieces	142	513		
Phillour Division.								143	524
B G. sleepers ...	636	2,207			Made over to Contractors.				
N. G. „ ...	2,458	3,687			Miscellaneous pieces ...	125	589		
Box wood logs ...	24	19						125	589
Scraps and pieces	119	233			Timber received in Forest cases.				
			3,237	6,146	Deodar logs ...	8	114		
					Scantlings ...	62	95		
								70	209
Carried forward ...	...	...	*27,394	*82,367	*Carried forward* ...	...	...	60,646	4,87,644

* Excludes Drift and waif in Kangra, 92=392 cft. erroneously shown in last return (see Drift Return of 1887-88).

Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPOTS OR SOLD LOCALLY DURING THE YEAR 1887-88—(continued).

Particulars.	No. or quantity.	Cubic feet.	Total of each Head. No. or quantity.	Total of each Head. Cubic feet.
Brought forward ...	...	...	27,394	82,367
Received from the Forest during the Year.				
Deodar logs ...	17,132	4,18,549		
„ scantlings ...	4,699	4,332		
B G. Sleepers ...	59,613	2,04,720		
N. G. „ ...	549	997		
Box-wood logs ...	4,139	2,621		
Pine and other logs	2,160	35,513		
„ „ scantlings ...	14,911	18,274		
Pine sleepers ...	17	58		
Miscellaneous pieces	7,649	19,597		
Pencil cedar ...	2	14		
			1,10,871	7,04,675
Received by Transfer from other classes.				
Deodar logs ...	22	153		
B. G. sleepers ...	120	360		
Pine logs ...	1	11		
			143	524
Received by Omissions in Former Returns.				
Pine logs ...	16	653		
„ and other scantlings ...	707	981		
Miscellaneous pieces	4,671	5,654		
			5,394	7,288
Received by Transfer from Sale Depots.				
Deodar logs ...	393	15,328		
Pine and other logs	5	67		
			398	15,395
Received from the Forests and sold locally.				
Deodar logs ...	540	10,003		
„ scantlings	7	19		
B G. sleepers ...	21	73		
Pine and other logs	52	938		
Pine and other scantlings ...	8,972	11,034		
Olive wood ...	546	200		
Miscellaneous pieces	104	325		
			10,242	22,592
Carried forward ...	...	...	1,54,442	8,32,841

Particulars.	No. or quantity.	Cubic feet.	Total of each Head. No. or quantity.	Total of each Head. Cubic feet.
Brought forward ...	...	...	60,646	4,87,644
Lost by remeasurement, or struck off for other causes.				
Deodar logs ...	15	1,200		
B. G. sleepers ...	35	122		
N. G. „ ...	2,956	5,541		
Pine and other logs	2	85		
Other scantlings...	8	24		
Miscellaneous pieces	3	6		
			3,019	6,978
Sold locally.				
Deodar logs ...	540	10,003		
do scantlings ...	7	19		
B. G sleepers ...	21	73		
Pine and other logs	52	938		
„ scantlings ...	8,972	11,034		
Olive wood ...	546	200		
Miscellaneous pieces	104	325		
			10,242	22,592
Balance at close of the year.				
Hazara Division.				
Pine and other scantlings ...	642	1,109	642	11,09
Rawalpindi Division				
Scantlings ...	164	144	164	144
*Chamba Division.**				
Deodar logs ...	84	2,790		
B. G. sleepers ...	38,180	1,33,051		
N. G. „ ...	142	393		
Deodar scantlings	4,033	3,620		
Pine and other scantling ...	881	802	43,920	1,40,656
Kangra Division.				
Deodar logs ...	130	8,055		
Pine and other logs	50	759		
Boxwood logs ...	10	6		
Pencil cedar ...	2	14		
B. G. sleepers ...	10	35		
N. G. „ ...	25	47		
Other scantlings ...	7	21		
			234	8,937
Carried forward...	...	...	118,867	608,060

* Information shewing balance at Forest Depots in Chamba Division not available.

Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPÔTS OR SOLD LOCALLY DURING THE YEAR 1887-88.—(continued).

Particulars.	No. or quantity.	Cubic feet.	Total of each head. No or quantity.	Total of each head. Cubic feet.	Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
Brought forward ...	...	...	1,54,442	8,32,841	*Brought forward* ...	...	...	1,18,867	6,68,060
Timber received in forest cases.					*Bashahr Division.*				
					Boxwood logs ...	11,294	7,117		
								11,294	7,117
Deodar logs ...	8	114							
Scantlings ...	62	95			*Jhelum Division.*				
			70	209					
					B. G. sleepers ...	1,073	3,756		
					Confiscated sleepers	45	157		
								1,118	3,913
					Chenab Division.				
					Deodar logs ...	2,730	74,482		
					Pine ,, ...	577	8,321		
					B. G. sleepers ...	9,932	31,275		
					N. G. ,, ...	57	87		
					Pine sleepers ...	3	12		
					Scraps and pieces...	328	1,275		
								13,627	1,15,452
					Phillour Division.				
					Deodar logs ...	406	17,818		
					B G. sleepers ...	4,214	14,623		
					N. G. ,, ...	540	810		
					Boxwood logs ...	24	19		
					Miscellaneous pieces	4,422	5,238		
								9,606	38,508
Grand Total ...	...	...	1,54,512	8,33,050	Grand Total ...	...	...	1,54,512	8,33,050
Total for 1886-87...	...	...	1,78,201	10,12,013	Total for 1886-87...	...	...	1,78,201	10,12,013

ABSTRACT.

Balance in hand at commencement of the year ...	...	...	27,394	82,367	Removed by, purchasers from depôts ...	...	...	58,477	4,67,988
Received from the forests during the year ...	...	...	1,10,871	7,04,675	Used by Department from depôts	...	...	1,304	2,702
Received by transfer from other classes	...	...	143	524	Returned to owners	...	...	1	13
Received by omissions in former returns ...	...	...	5,394	7,288	Transferred to sale depôts ...	...	...	526	15,619
Received by transfer from sale depôts	...	...	398	15,395	Transferred to other classes ...	...	...	143	524
Received from the forests and sold locally ...	...	...	10,242	22,592	Made over to Contractors ...	...	...	125	589
Timber received in forest cases ...	...	...	70	209	Timber received in forest cases ...	...	...	70	209
					Lost by remeasurement, or struck off, for other causes	...	...	3,019	6,978
					Sold locally ...	...	...	10,242	22,592
					Balance at close of the year ...	...	...	80,605	3,15,836
Grand Total ...	...	...	1,54,512	8,33,050*	Grand Total ...	...	...	1,54,512	8,33,050
Total for 1886-87...	...	...	1,78,201	10,12,013	Total for 1886-87...	...	...	1,78,201	10,12,013

* Note.—All timber confiscated and transferred to Government account, is included in this return.

Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPOTS OR SOLD LOCALLY DURING THE YEAR 1887-88.—(continued).

Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
DRIFT TIMBER.				
BALANCE AT COMMENCEMENT OF THE YEAR.				
Kangra Division.				
Deodar scantlings...	45	157	...	...
Miscellaneous pieces	47	235	92	392
Add.—BALANCE AT COMMENCEMENT OF THE YEAR OMITTED IN PREVIOUS RETURNS.				
Jhelum Division.				
Deodar logs ...	1	56	...	...
,, sleepers ...	255	892	...	...
Pine and other logs	1	45	...	...
Scraps and pieces...	6	6	263	999
Chenab Division.				
Deodar logs ...	200	2,793	...	...
,, sleepers ...	64	228	...	...
Pine logs ...	68	931	...	...
,, sleepers ...	1	3	...	...
Scraps and pieces	118	433	451	4,388
Phillour Division.				
Deodar logs ...	2	16	...	...
Scantlings ...	1,145	2,290	1,147	2,306
RECEIVED DURING THE YEAR.				
Deodar logs ...	599	8,961	...	...
,, sleepers ...	204	445	...	...
,, scantlings...	229	564	...	...
Pine logs ...	81	1,376	...	...
,, sleepers ...	350	114	...	...
Scantlings ...	2,851	5,702	...	...
Scraps and pieces	2,382	5,377	6,696	22,539
Total ...	...	...	8,649	30,624

Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
MADE OVER TO CLAIMANTS.				
Deodar logs ...	286	3,350	...	...
,, sleepers ...	245	680	...	...
,, scantlings	230	591	...	...
Pine and other logs	7	64	...	...
,, sleepers ...	194	63	...	...
Scantlings ...	3,645	7,290	...	...
Scraps and pieces	1,346	1,971	5,953	14,009
TRANSFERRED TO GOVERNMENT ACCOUNT.				
Deodar logs ...	356	6,839	...	...
,, sleepers ...	237	776	...	...
,, scantlings	44	130	...	...
Pine and other logs	114	1,946	...	...
,, sleepers ...	5	20	...	...
Scantlings ...	351	702	...	...
Scraps and pieces...	972	3,108	2,079	13,511
LOST BY RE-MEASUREMENT.				
Deodar logs ...	...	4	...	4
BALANCE AT CLOSE OF THE YEAR.				
Chamba Division.				
Deodar logs ...	37	*	...	*
,, sleepers...	4	*	...	*
Pine logs ...	1	*	...	*
,, sleepers ...	142	*	...	*
Scraps and pieces	25	*	209	*
Kangra Division.				
Miscellaneous pieces	34	68	34	68
Jhelum Division.				
Deodar logs ...	1	44	...	
,, sleepers ...	19	66	...	...
Pine logs ...	3	39	23	149
Chenab Division.				
Deodar logs ...	122	1,589	...	...
,, sleepers...	18	53	...	...
Pine logs ...	25	303	...	...
,, sleepers ...	10	34	...	...
Scraps and pieces	175	900	350	2,879
Mooltan Division.				
Scraps and pieces	1	4	1	4
Total ...	...	...	8,649	30,624

* Figures not available from Chamba Division.

Form No. 56.

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPOTS OR SOLD LOCALLY DURING THE YEAR 1887-88.—(continued.)

Firewood and Charcoal

Particulars.	No. of quantity.	Cubic feet.	Total of each head. No. of quantity.	Total of each head. Cubic feet.
BALANCE IN HAND AT COMMENCEMENT OF THE YEAR.				
Rawalpindi Division.				
Charcoal maunds ...	1,559	...	1,559	...
Lahore Division.				
Firewood cubic feet	...	6,89,677	...	6,89,677
Add.—BALANCE IN FOREST DEPOTS AT THE COMMENCEMENT OF THE YEAR OMMITTED IN PREVIOUS RETURN				
Hazara Division.				
Firewood cubic feet	...	4,028	...	4,028
Charcoal ,, ...	...	7,140	...	7,140
Rawalpindi Division				
Firewood cubic feet	...	47,116	...	47,116
Lahore Division.				
Firewood cubic feet	...	48,661	...	48,661
Phillour Division.				
Firewood cubic feet	..	33,375	...	33,375
Charcoal ,,	...	7	...	7
REMOVED FROM THE FORESTS IN DEPOTS.				
Firewood cubic feet	...	13,47,511	..	13,47,511
Charcoal ,,	...	21,966	..	21,966
,, maunds ...	6,824	...	6,824	...
RECEIVED FROM THE FORESTS AND SOLD LOCALLY.				
Firewood cubic feet	.	3,27,804	...	3,27,804
Charcoal ,,	...	3,706	...	3,706
,, maunds ...	33	...	33	...
RECOVERED IN FOREST CASES.				
Firewood cubic feet	...	61	...	61
Total ...	8,416	25,31,052	8,416	25,31,052
Total for 1886-87...	22,393	24,20902	22,393	24,20,902

Particulars.	No. of quantity.	Cubic feet.	Total of each head. No. of quantity.	Total of each head. Cubic feet.
REMOVED BY PURCHASERS FROM DEPOTS.				
Firewood cubic feet	...	14,71,241	..	14,71,241
Charcoal ,,	...	19,856	...	19,856
,, maunds ...	8,383	...	8,383	
USED BY DEPARTMENT.				
Firewood cubic feet	...	1,749	...	1 749
Charcoal ,,	...	42	...	42
LOST BY REMEASUREMENT, DRYAGE, &c.				
Firewood cubic feet	...	2,253	...	2,253
CONVERTED INTO CHARCOAL.				
Firewood cubic feet	...	25,708	...	25,708
SOLD LOCALLY.				
Firewood cubic feet	...	3,27,804	...	3,27,804
Charcoal ,,	...	3,706	...	3,706
,, maunds	33	...	33	...
RECOVERED IN FOREST CASES.				
Firewood cubic feet	...	61	...	61
BALANCE AT CLOSE OF YEAR.				
Hazara Division.				
Firewood cubic feet	...	6055	...	6,055
Charcoal ,,	..	9,208	...	9,208
Rawalpindi Division				
Firewood cubic feet	...	1,000	...	1,000
Lahore Division.				
Firewood cubic feet	...	6,15,590	...	6 15,590
Mooltan Division.				
Firewood cubic feet	...	13,400	...	13,400
Phillour Division.				
Firewood cubic feet	...	33,369	...	33,369
Charcoal ,,	..	7	...	7
Total ...	8,416	25,31,052	8,416	25,31,053
Total for 1886-87...	22,393	24 20,902	22,393	24 20,902

Form No. 56

ACCOUNT OF TIMBER AND OTHER PRODUCE CUT OR COLLECTED BY GOVERNMENT AGENCY AND BROUGHT TO SALE DEPOTS OR SOLD LOCALLY DURING THE YEAR 1887-88.—(concluded).

Particulars.	No. or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.	Particulars.	No or quantity.	Cubic feet.	Total of each head. No. or quantity.	Total of each head. Cubic feet.
BAMBOOS.									
Balance in hand at commencement of the year.					Removed by purchasers from depots.				
Phillour Division.					Bamboos ...	6,73,679	...	6,73,679	
Bamboos ..	12	...	12	...	Used by Department.				
Received from forests in depots.					Bamboos ...	156	...	156	
Bamboos ...	6,73,823	...	6,73,823	...					
Total ...	6,73,835	...	6,73,835	...	Total ...	6.73,835	...	6,73,835	...
Total for 1886-87...	7,43,155	...	7,43,155	...	Total for 1886 87...	7,43,155	...	7,43,155	...
MISCELLANEOUS PRODUCE.									
Balance in hand at commencement of the year.					Sold from depots.				
Hasara Division.					Shingles ...	2,34.252	1,521	2,34 252	1,521
Shingles ...	40,892	265	40,892	265	Dhajjies ...	36,345	472	36.345	472
Add-Balance at Commencement of the year omitted in previous return.					Grass, maunds ...	3,761	...	3,761	...
					Turpentine „ ...	6	...	6	..
					Walnuts	8	...	8	...
Jhelum Division.					Sold locally.				
Grass maunds ...	2,215	...	2,215	...	Grass, maunds ...	1,079	...	1,079	..
Multan Division.					Turpentine „ ...	3	...	3	..
Grass maunds ...	250	..	250	...	Used by Department.				
Received from forests in depots.					Shingles ...	850	6	850	
					Lost by dryage, &c.				
Shingles ...	2,90,735	1,889	2,90,735	1,889	Grass, maunds ...	68	...	68	...
Dhajjies ...	48,935	636	48,935	636	Balance at close of the year.				
Grass, maunds ...	2,414	...	2,414	...					
Turpentine „ ...	6	...	6	...	*Hasara Division.*				
Walnuts „ ...	8	...	8	...					
					Shingles ...	96,525	627	96.525	627
					Dhajjies ...	12,590	164	12,590	164
Received from forests and sold locally.					*Jhelum Division.*				
Grass maunds ...	1,079	...	1,079	...	Grass, maunds ...	1,050	...	1,050	...
Turpentine „ ..	3	...	3	...					
Total ...	...	...	...	...	Total ...	...	...	...	...

Form No. 57A.

ABSTRACT SHOWING THE VALUE OF TIMBER AND OTHER PRODUCE AT SALE AND FOREST DEPOTS FOR THE YEAR 1887-88.

Description of Timber and other produce.	*On hand at commencement of the year.*			*On hand at close of the year,*			*Difference in value.*		Remarks.
	No.	Cubic feet.	Value.	No.	Cubic feet.	Value.	In favor of the year.	Against the year.	
			Rs.			Rs.	Rs.	Rs.	
Timber									
Sale Depots.									
Deodar timber (logs) ...	704	26,766	22,767	3,350	1,03,145	76,956	54,189	...	
Pine „ „ ...	789	22,958	8,663	627	9,080	1,845	...	6,818	
Deodar scantlings ...	6,564	6,286	6,169	4,633	3,620	3,620	...	2,549	
Pine „ and others	1,175	1.134	499	888	823	322	...	177	The total opening balance for timber, as here shewn, is less than the closing figures in the return for 1886-87 by 392 c. ft. valued at Rs 150, representing the balance of unconfiscated drift timber, and now shown in form 56 (drift.)
B. G. sleepers	1,101	3,548	2,592	53,454	1 82,897	1,56,443	1,53,851	...	
N. G. sleepers	9,412	16,704	10,842	764	1,337	903	...	9,939	
Pine sleepers	...	...	...	3	12	4	4	...	
Boxwood pieces	7,433	4,650	14,719	11,328	7,142	18,045	4,226	...	
Other wood pieces ...	7	20	7	...	...	...	...	7	
Scraps and pieces ...	209	301	68	328	1,275	164	96	...	
Shingles	40,892	265	250	96,525	627	395	145	...	
Pencil cedar	...	...	...	2	4	12	12	...	
Dhajjies	...	...	...	12,590	164	75	75	...	
Total ...	68,286	82,632	66,576	1,84,492	2,10,126	2,59,684	1.93,108	...	
Forest Depots.									
Pine timber (logs) ...	16	653	41	...	...	...	...	41	
Pine and other scantlings	707	981	49	806	1,253	569	520	...	
Miscellaneous pieces ...	...	5,654	1,282	4,422	5.238	1,188	...	94	
Total ...	723	7,288	1,872	5,228	6,491	1,757	385	...	
Firewood, Charcoal and Bamboos.									
Sale Depots.									
Bamboos	12	...	12	...	...	...	...	12	
Firewood (cubic feet) ...	...	6,89,677	17,000	...	5,61.855	28,100	11,100	...	
Charcoal (maunds) ...	1,559	...	1,559	...	...	...	...	1,559	
Total ...	1,571	6 89.6771	8,571	...	5,61 855	28,100	9,529	...	
Forest Depots.									
Firewood (cubic feet) ...	...	1,33,180	4,092	...	1,07,559	4,312	220	...	
Charcoal „ ...	...	7,147	339	...	9,215	331	...	8	Total figures for the closing balance of the return for 86-87, took no account of produce at forest depots as now shown.
Grass (maunds)	2,465	...	1,170	1,050	...	525	...	645	
Total ...	2,465	1,40,327	5,601	1,050	1,16,774	5,168	...	433	
Grand Total ...	...	...	92,120	...	...	2,94,709	2,02,589	...	
Total for 1886-87 ...	...	...	97,889	...	...	85,297	...	12,543	

Form No. 57B.

ABSTRACT SHOWING THE VALUE OF LIVE AND DEAD STOCK FOR THE YEAR 1887-88.

Description of Timber and other produce.	*On hand at commencement of the year.*			*On hand at close of the year*			*Difference in value*		Remarks
	No.	Cubic feet.	Value	No.	Cubic feet.	Value	In favor of the year.	Against the year.	
			Rs			Rs.	Rs.	Rs.	
Dead Stock.									
Hazara Division ...				846	...	9,731	9 731	...	The Hazara Division is unable to give the value of stock at the commencement of the year. The difference of value in favour of the year is therefore subject to correction
Rawalpindi „	816		3 167	669		1,615	...	1,552	
Chamba „ ..	1,734		2,598	2,024		2,828	230		
Kangra „ ..	1,158		6,521	1,165	...	6,600	79		
Kulu „ ...	1,537		2,698	1,526		2,765	67	..	
Bashahr „ ...	1 061		5,030	1,054	...	4,751		279	
Jhelum „ ..	614		7,578	612		7,000	..	578	
Chenab „	...		10,990	..	...	11,057	67		
Lahore „ ..	3,181		13,689	3,117	...	13,442	...	247	
Multan „ ...	385		1,498	407	..	1,267	...	231	
Montgomery „	248		1,243	264	...	1,194		49	
Phillour „	1,960		1,154	2,184	...	1,000	...	154	
Direction „ ..	160		1,407	176	...	1,777	370		
Working plans	137		1,394	135	...	1,266	...	128	
Total			58,967			66,293	7,326	...	
									Mules.
Live Stock									Bullocks.
Bashahr Division	5		650	5		650			Ditto.
Chenab „	7		200	7	..	200	...		
Lahore „	28	...	150	26	...	130	...	20	
Total	...	...	1,000	...	..	980	...	20	
Grand Total ...		...	59,967	...	...	67,273	7,326	...	

SUMMARY OF REVENUE OF THE DIFFERENT DIVISIONS FOR 1887-88.

BUDGET HEADS.	Direction Division.	Bashahr Division.	Phillour Division.	Kulu Division.	Kangra Division.	Chamba Division.	Lahore Division.	Montgomery Division.	Multan Division.	Chenab Division.	Jhelum Division.	Rawalpindi Division.	Hazara Division.	TOTAL.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A P	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY :—														
a. Timber ...	...	613 11 10	1,19,045 3 8	...	28,489 7 3	61,322 2 11	...	6 8	232 13 9	22,497 9 3	53,711 1 4	69 1 9	16,226 9	3,02,21 4 9
b. Firewood and Charcoal	...	...	106 2	...	19	130	32,353 3	...	7,592 11 6	24,443 8	...	8,733 12 9	4 474 2 8	77,85 11
c. Bamboos ...	...	...	246 15 9	...	12,565 14 9	37 3 8	...	...	...	...	...	...	...	12,85 2
d. Sandal-wood ...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
e. Grass and other Minor Produce .	...	63	...	...	...	...	363 2 1	...	458 7	358 6 8	887 12 11	...	65 7	2,19 3 8
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS :—														
a. Timber ...	...	229 8	...	503 10	10,418 10 9	925 9	...	192 7 3	765 5	...	9 4 0	5,951 10 1	5,949 5 6	24,937 5 7
b. Firewood and Charcoal	...	...	155 11 10	...	294 15	35 15 9	3,932 13 1	65,347 1 3	40,184 2 10	5,517	787 6 2	8,514 8 0	4,723 2 10	1,29,492 12 9
c. Bamboos ...	...	...	40 5	...	40 1 7	...	...	...	...	...	...	50 0 0	...	130 6 7
d. Grazing and Fodder Grass.	...	...	2,886 9 2	104 12 3	5,750 1 8	297	27,992 3 6	32,525 10 2	7,656 4 6	97,530 10 10	11,670 11 9	3,187 2 6	7,577 3 6	1,97,178 5 10
e. Other Minor Produce ...	...	...	...	...	66 14 6	12	2,437 6	1,157 6 3	302	631 5 2	201 5 3	438 14 6	172 13 0	5,420 7 8
III.—CONFISCATED DRIFT AND WRECK WOOD.	...	2	987 8 10	24 13	286 1 3	300 14 8	...	...	826	294 4 10	8,641 4 8	340 6 8	...	11,709 18 11
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT														
a. Duty on Foreign Timber and other Forest Produce.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Revenue from Shared and Private Forests.	...	...	...	...	2,600 9 9	...	...	...	...	...	...	...	294 11 0	2,895 4 9
V.—MISCELLANEOUS :—														
a. Fines and Forfeitures ...	...	10	...	...	387 13 9	10	97 1	...	...	...	...	11 11 6	305 4 0	923 14 3
b. Refunds ...	26 11 4	68 13 6	0 15 0	2	0 1 4	4 2 8	62 13 7	9 8	14 0 11	201 8 1	6 10 8	7 0 0	2 2 0	407 1 5
c. Other sources ...	50 6 2	...	939 1 2	1,332 4 0	5,023 4 10	1,436 2 7	672 5 0	721 6 7	639 12 10	1,663 11 9	3,883 8 9	2,23 8 0	126 12 1	18,726 3 9
TOTAL RECEIPTS ...	77 1 6	987 1 4	1,24 410 8 5	1,967 7 3	65,943 0 5	64,511 3 3	67,910 12 6	99,959 15 0	58 672 9 4	1,53,138 0 7	79,791 1 6	29,65 5 9	39,917 8 4	7,86,936 12 0

CALCUTTA,
The 4th June 1888.

JAS. TAYLOR,
Assistant Comptroller General (Forests).

Form No. 58.

SUMMARY OF EXPENDITURE OF THE DIFFERENT DIVISIONS.

Budgetheads.	Direction Division.			Bashahr Division.			Phillour Division.			Kulu Division.			Kangra Division.			Chamba Division.			Lahore Division.			Mont-gomery Division.			Mooltan Division.			Chenab Division.			Jhelum Division.			Rawalpindi Division.			Hazara Division.			Total		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
A.—CONSERVANCY AND WORKS.																																								
I.—Timber and other produce removed from the forests by Government Agency:—																																								
a. Timber ...	18	12	4	41,163	7	5	12,075	10	2	15,320	3	9	3,734	13	2	1,17,522	11	8	...	...	...	...	...	...	38	9	9	9,203	2	5	3,860	8	6	1	3	6	14,045	12	7	2,16,984	15	0
b. Firewood and Charcoal	1	4	0	...	...	...	7	5	1	...	...	...	23	1	0	...	...	...	9,356	11	2	...	...	...	60,295	12	6	8,539	11	11	...	...	...	4,125	5	5	3,621	15	8	31,971	2	9
c. Bamboos ...	...	...	...	...	...	...	6	0	6	...	...	...	2,689	2	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,695	3	1
d. Sandal-wood ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	682	4	0
e. Grass and other minor produce ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	300	2	1	...	...	...	141	11	6	53	8	6	148	9	8	...	...	...	38	4	3	2,208	5	2
II.—Timber and other produce removed from the forests by consumers or purchasers ...	...	...	...	...	...	...	44	15	0	...	...	...	28	7	0	375	10	9	...	...	...	710	9	9	34	6	2	391	13	11	1	3	0	490	12	2	130	7	5	3,805	5	6
III.—Confiscated Drift and Waif wood ...	...	...	...	...	...	...	756	15	10	...	...	...	130	3	10	...	...	...	...	...	...	...	...	...	192	7	4	1,188	12	4	1,139	9	0	397	5	2	...	...	...	...	...	...
IV.—Revenue from forests not managed by Government																																								
a. Duty on foreign timber and other forest produce ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Revenue from shared and private forests ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
V.—Rent of leased forests, and payments to shareholders in forests managed by Government ...	...	...	...	10,150	0	0	455	0	0	65	4	0	2,626	10	8	27,250	0	0	...	...	...	...	...	...	...	...	...	85	15	9	...	...	...	...	...	...	2,795	11	...	43,428	9	5
VI.—Live Stock, Stores, Tools and Plant:—																																								
a. Purchase of cattle ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
b. Feed and keep of Cattle ...	...	...	...	539	5	6	...	...	...	0	11	9	...	...	...	...	...	...	175	11	1	...	...	...	...	...	...	187	12	3	...	...	...	...	...	...	...	...	...	904	2	7
c. Purchase of Stores, Tools and Plant ...	505	2	7	358	5	6	212	0	9	120	1	0	186	1	6	77	10	7	124	9	9	39	4	0	57	14	0	103	10	9	99	9	0	9	13	3	95	12	9	1,989	15	11
VII.—Communications and Buildings:—																																								
a. Roads and Bridges ...	...	...	...	2,984	15	3	165	9	6	25	2	6	59	13	6	2,808	11	7	...	...	...	...	...	...	98	13	0	19	1	0	123	7	6	29	6	8	194	10	11	6,509	11	5
b. Buildings ...	...	...	...	514	1	10	602	14	0	1,353	11	5	405	5	0	2,992	14	4	130	12	9	121	8	0	448	1	7	55	2	3	839	6	0	223	9	11	357	15	5	8,037	13	0
c. Other Works ...	...	...	...	...	...	...	...	...	...	...	...	...	0	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	13	0	28	15	9	...	...	...	30	12	3

VIII.—Demarcation Improvement and extension of Forests :—														
a. Demarcation ...	...	519 15 0	...	32 8 3	495 14 8	59 2 0	1,452 13 11	285 2 8	979 14 9	1,023 13 9	1,414 8 7	748 14 10	307 7 6	7,315 3 11
b. Compensation for Land and Rights ...	...	12 12 0	...	...	...	...	...	...	...	...	...	...	...	12 12 0
c. Surveys and Working Plans	180 9 7	67 3 3	22 14 0	...	...	130 6 9	...	49 10 0	101 13 9	46 0 0	127 3 9	343 15 11	...	1,069 13 0
d. Sowing and planting ...	...	811 15 3	4,130 8 4	368 8 9	1,406 10 0	1,445 2 6	24,976 14 10	33 10 0	827 7 6	2,213 6 9	954 ... 4	88 0 0	1,191 15 10	38,440 4 0
e. Protection from Fire ...	...	...	325 6 0	4 1 7	252 3 8	176 2 11	...	92 [illegible] 8	172 3 10	4[illegible] 12 9	.. 0 ..	252 12 9	336 0 0	1,659 4 8
f. Other Work ...	...	172 3 6	140 8 6	23 1 6	...	113 1 6	550 10 10	...	90 1 0	2,650 15 9	29 .. 0	279 2 10	3 4 0	4,352 5 11
IX.—Miscellaneous :—														
a. Refunds ...	...	...	355 4 0	...	...	5 7 11	0 0 4	...	...	635 13 9	1,063 5 4	8 1 5	10 1 6	2,080 6 3
b. Law Charges ...	81 8 0	...	0 5 0	...	26 0 0	...	2 10 0	23 4 0	1 5 3	0 15 0	1 3 3	14 5 8	12 15 0	163 5 9
c. Other Charges ...	54 11 0	301 10 9	4 9 0	17 10 0	50 7 9	185 7 7	367 9 9	14 9 0	39 2 3	15 1 0	2 2 0	10 10 0	52 14 1	1,056 13 8
Total, A.—Conservancy and Works ...	841 15 6	57,506 9 3	19,305 1 2	17,331 0 6	12,119 13 4	1,5[illegible],0[illegible]2 9 4	137438 10 6	1,370 2 1	9,519 2 1	26,757 9 10	9,807 4 5	7,039 6 10	23,188 4 5	3,75,398 3 3
B.—ESTABLISHMENTS.														
I.—Salaries :—														
a. Conservators ...	13,648 [illegible] 4	...	...	...	...	...	...	...	...	...	...	...	14 8 3	13,663 0 7
b. Superior Officers ...	10,849 10 8	8,900 0 0	11,203 3 4	5,767 11 10	9,516 10 8	20,091 13 2	7,840 5 2	5,089 9 2	8,570 0 0	5,270 0 0	10,200 0 0	960 0 0	8,653 10 9	1,21,552 10 9
c. Subordinate Forest and Depôt Establishments.	180 10 4	4,928 9 1	3,538 4 10	3,942 2 7	7,904 10 0	10,149 3 8	7,763 1 11	2,747 10 [illegible]	6,250 3 8	10,455 11 10	9,408 10 8	7,264 12 2	7,571 13 3	82,195 8 9
d. Office Establishments	5,739 15 5	1,382 0 0	1,080 0 0	716 0 0	1,707 0 0	2,277 8 0	1,632 12 0	788 3 [illegible]	1,440 0 0	1,663 4 11	1,703 14 0	1,430 11 0	1,582 0 0	23,143 4 6
e. Deputation and Special Allowances.	...	2,400 0 0	...	...	277 6 8	...	...	...	...	...	111 13 4	...	...	2,789 4 0
II.—Travelling Allowances.—														
a. Conservators ...	2,441 4 2	...	...	...	...	...	...	...	...	...	...	...	...	2,441 4 2
b. Superior Officers ...	2,346 12 [illegible]	2,024 8 10	2,334 4 0	1,206 8 0	2,373 14 8	3,313 [illegible] 0	1,976 12 11	854 10 0	1,331 12 [illegible]	1,175 12 0	891 4 10	1,255 8 0	1,280 6 8	22,365 15 11
c. Subordinate Forest and Depôt Establishments.	31 10 8	2,079 2 8	919 2 5	535 3 8	740 11 1	911 9 [illegible]	816 10 0	453 7 [illegible]	952 12 10	1,476 2 10	1,229 12 7	1,027 14 0	928 7 8	12,102 11 6
d. Office Establishments	615 2 5	766 2 0	426 6 5	320 2 0	378 9 10	95 9 8	360 8 6	217 13 [illegible]	115 3 7	292 10 7	152 2 5	308 5 [illegible]	188 2 7	4,239 14 9
III.—Contingencies.—														
a. Stationery ...	32 8 9	74 5 0	64 13 9	108 4 9	126 9 6	66 1 4	36 12 9	39 13 [illegible]	56 12 0	114 13 0	66 9 6	48 10 5	67 12 6	903 15 0
b. Carriage of Tents and Records.	776 5 2	120 14 4	134 4 0	476 5 4	521 2 9	334 6 1	32 3 0	148 2 [illegible]	158 6 10	136 13 0	102 10 10	71 9 [illegible]	366 7 2	3,387 10 6
c. Rents, Rates and Taxes	880 0 0	41 4 0	360 0 0	216 0 0	420 0 0	250 0 0	600 0 0	420 0 0	360 0 0	431 4 11	246 8 7	52[illegible] 12 [illegible]	503 0 0	5,217 13 9
d. Pay of Police Guards	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Official Postage ...	922 6 6	80 4 0	207 11 0	58 4 0	250 13 6	131 5 0	172 14 6	120 7 [illegible]	191 5 6	265 5 3	218 14 0	24[illegible] 2 6	216 10 6	3,090 7 3
f. Sundries ...	1,157 7 5	860 4 7	292 13 6	208 9 0	281 2 3	403 13 [illegible]	190 10 5	202 1 8	250 3 2	560 8 6	212 6 2	17[illegible] 0 11	520 14 2	5,322 11 11
Total B. Establishments ...	39,625 5 10	23,660 3 0	20,560 15 1	13,555 3 2	24,498 10 11	38,02[illegible] 1 5	21,482 11 2	11,090 14 0	19,676 11 1	21,842 7 10	24,634 10 11	21,963 6 1[illegible]	21,893 1 6	3,02,514 3 4
Grand Total of Expenditure ...	40,467 4 4	81,202 12 [illegible]	39,866 0 3	30,886 3 8	36,613 8 3	1,91,106 10 9	58,921 5 8	12,461 0 1	29,196 7 2	48,600 1 8	34,441 15 4	29,002 13 [illegible]	45,082 1 11	6,77,91[illegible] 6 7

Calcutta,
The 4th June 1888.

Jas. TAYLOR,
Assistant Comptroller-General (Forests).

Form No. 59.

Dr. ACCOUNT CURRENT FOR THE YEAR 1887-88 **Cr.**

	Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.	Rs.	A.	P.
To Cash Balance	...	...	...	2,496		6	*By Expenditure as per Annual Summary (Form No. 58)* ...	...	...	...	6,77,62	6	7
„ *VIII.—Assessed Taxes*—													
Income Tax—deductions from salaries	...	...	...	4,141	10	0	„ *Deposits*	...	...	...	3,05C	1	8
„ *Revenue as per Annual Summary (Form 58)*	...	...	...	7,86,936	11	0							
„ *Service Funds*—							„ *Forest Cash Remittances (Local)*—						
Civil Fund, Ordinary (Bengal) ...	...	...	...				Remittances to Treasuries	7,21,270	7	10			
Do. Additional (do.)	...	...	...					1,156	14	6			
Military Fund (Bengal)	...	...	...				Inter-Divisional Transfers				7,22,427	6	4
Do. (Madras)	566	12	4										
Military Orphan Fund (Bengal) ...	...	...	...				„ *Advances Recoverable*	...	...	...	4,13,875	6	9
Uncovenanted Service Family Pension Fund (Bengal) ...	3,788	5	0										
General Family Pension Fund	...	...	...				„ *Suspense*	...	...	...	200	0	3
Hindu Family Annuity	...	...	...										
				4,355	1	4							
„ *Deposits*	...	...	...	2,073	11	0	„ *Account Current (other Governments)*—						
„ *Forest Cash Remittances (Local)*—													
Forest Cheques drawn	6,51,085	8	11				Remittances to the Government of India	3,974	9	5			
Inter Divisional Transfers	1,156	14	6										
				6,52,242	7	5	Ditto ditto N.-W. P. and Oudh ...	66	3	0			
„ *Advances recoverable*	...	...	...	4,13,633	9	0					4,040	12	5
„ *Suspense*	...	...	...	283	5	4	„ *Inter-Departmental Transfers*—						
„ *Account Current (other Governments)*—							Public Works Department, State Railways, N.-W. Ry....	43,905	3	7			
Remittances from Government of India ...	3,110	13	0										
Ditto ditto N. W. P. and Oudh ...	73	3	0				Ditto ditto Other Branches ...	19,963	10	2			
				3,184	0	0							
„ *Inter-Departmental Transfers*—							Military Department (Bengal)	1,766	2	8			
Public Works Department, State Railways, N.-W. Ry. ...	71	8	2										
Ditto ditto other Branches ...	14,842	8	0				*Civil Department*—	...			...		
Millitary Department (Bengal)	220	4	0					Rs. A. P.					
Civil Department— Rs. A. P.							Jails	42 3 2			...		
Jail 113 3 0													
Mathematical Instrument Department 24 15 0							Miscellaneous	186 9 3			228	12	5
Miscellaneous 4,651 12 0											65,863	12	10
Survey of India Department ... 235 7 0													
	5,025	5	0	20,159	9	2	„ *Cash Balance*	...	...	...	2,136	7	11
TOTAL ...	...	...	...	18,89,506	6	9	TOTAL ...	...	...	...	18,89,506	6	9

CALCUTTA,
The 4th June 1888.

JAS. TAYLOR,
Asstt. Comptroller-General (Forests).

Form No. 60.

REVENUE RECEIVED AND OUTSTANDINGS ON ACCOUNT OF REVENUE DURING 1887-88.

Division.	Particulars.	Outstandings at commencement of year			Value of sales and other revenue during year.			Total.			Amount realized during year.			Balance due to the Department at end of year.			Remarks.
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Direction					77	1	6	77	1	6	77	1	6				(a) Rs 222-13-3, written off, vide Financial Commissioner's No. 438, dated 23rd January 1888.
Hazara		554	3	2	39,398	15	2	39,953	2	4	39,917	8	4	35	10	0	
Rawalpindi		1,272	13	10	28,566	1	9	29,838	15	7	29,650	5	9	188	9	10	(b) Rs. 581-6-6, written off, vide Commissioner Rawalpindi No. 2092 dated 26th August 1887.
Chamba		2,508	0	0	64,210	12	10	66,718	12	10	64,511	3	3	2,207	9	7	
Kangra		520	2	0	65,823	14	5	66,344	0	5	65,943	0	5	401	0	0	
Kulu					1,967	7	3	1,967	7	3	1,967	7	3				(c) Rs. 137-11-9, written off by Commissioner's No. 182, dated 20th May 1887.
Bashahr					987	1	4	987	1	4	987	1	4				
Jhelum		317	4	0	79,696	10	9	80,013	14	9	(a) 80,013	14	9				Rs. 941-15-6.
Chenab		44,670	7	3	1,40 749	15	3	1,85,420	6	6	(b) 1,53,719	7	1	31,700	15	5	(d) Revenue as per Form, No. 35 Rs. 7,86,936-12-0
Lahore		1,367	5	3	67,995	2	6	69,362	7	9	67,910	12	6	1,451	11	3	Amount written off under sanction Rs. 941-15-6
Mooltan					58,672	9	4	58.672	9	4	58,672	9	4				
Montgomery		14,759	15	7	92,009	15	7	1,06.769	15	2	(c) 1,00,097	11	7	6,672	3	7	Rs. 7,87,878-11-6
Thillour					1,24,413	10	5	1,24.413	10	5	1,24,410	8	5	3	2	0	
Total		65,970	3	1	7,64.569	6	1	8,30,539	9	2	(d) 7,87,878	11	6	42,660	13	8	
For 1886-87		55,840	4	2	11,46,676	7	1	12,02,516	11	3	11,36,546	8	2	65,970	3	1	

Form No. 61.

OUTSTANDINGS AND LIABILITIES ON ACCOUNT OF CONTRACTORS AND DISBURSERS FOR 1887-88.

DIVISION.	Department Debtor.			Department Creditor.			Balance Due.	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To Department (Outstandings.)	By Department (Liabilities.)
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Direction	...	5,09 3 11	5,095 3 11	129 9 0	5,258 10 6	5,388 3 6	202 15 7	...
Bushahr	...	27,65 14 2	27,656 14 2	5,100 8 3	27,820 11 8	32,921 3 11	5,264 5 9	...
Phillour	...	29,29 0 7	29,295 0 7	876 4 3	28,830 3 0	29,706 7 3	411 6 7	...
Kulu	...	24,08 2 6	24,095 2 6	128 11 4	25,095 12 4	25,224 7 8	539 5 2	...
Kangra	...	37,82 7 0	37,820 7 0	393 14 5	37,602 8 9	38,001 7 2	181 0 2	...
Chamba	...	1,52,48 5 10	1,52,480 5 10	4,590 4 9	1,52,083 13 8	1,56,674 1 5	4,193 11 7	...
Lahore	...	38,71 7 3	38,713 7 3	148 0 4	30,752 1 8	38,900 2 0	186 10 9	...
Montgomery	...	6,31 14 9	6,319 14 9	80 8 0	5,322 14 0	5,403 6 0	83 7 3	...
Mooltan	...	15,81 13 11	15,811 13 11	115 13 3	15,829 0 9	15,944 14 0	133 0 1	...
Chenab	...	7,08 11 2	7,8.8 11 2	146 13 7	7,708 14 4	7,855 11 11	237 0 4	...
Jhelum	...	22,38 5 9	22,309 5 9	30 12 2	22,589 0 9	22,619 12 11	310 7 2	...
Rawalpindi	...	19,416 10 9	19,416 10 9	269 13 3	19,251 10 3	19,521 7 6	104 13 6	...
Hazara	...	29,410 7 5	29,410 7 5	224 15 11	29,750 2 1	29,975 2 0	564 10 7	...
Total	...	4,13,633 9 0	4,13,633 9 0	12,201 0 5	4,13,875 6 9	4,26,136 7 2	12,502 14	...

CALCUTTA :
Dated 4th June 1888.

JAS. TAYLOR,
Asst. Comptroller-General (Forests)

Form No. 62.

FINANCIAL RESULTS OF THE YEAR 1887-88.

Division.	*Timber and other produce removed from the Forests by Government Agency.*		*Other Revenue.*		*Formation, protection and improvement of forests.*	*Total.*		Remarks.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Hazara	20,766	27,848	19,152	7,528	9,706	39,918	45,082	
Rawalpindi	9,149	11,850	20,501	7,848	9,305	29,650	29,003	
Chamba	61,790	1,57,487	2,721	13,201	20,418	64,511	1,91,106	
Kangra	41,360	17,464	24,583	8,317	10,838	65,943	36,619	
Kulu	25	19,965	1,912	4,566	6,355	1,967	30,886	
Bashahr	679	59,652	308	8,416	13,195	987	81,263	
Jhelum	63,240	13,412	16,551	9,307	11,723	79,791	34,442	
Chenab	47,594	26,499	1,05,544	8,398	13,703	1,53,138	48,600	
Lahore	32,716	16,968	35,195	7,606	34,347	67,911	58,921	
Mooltan	9,111	13,257	49,562	6,648	9,291	58,673	29,196	
Montgomery	7	3,717	99,953	4,456	4,288	99,960	12,431	
Phillour	1,20,388	20,261	4,023	7,312	12,203	1,24,411	39,866	
Total ...	4,06,825	3,88,380	3,80,035	93,603	1,55,462	7,86,860	6,37,445	
Direction ...	...	13,482	77	13,470	13,515	77	40,467	
Total ...	4,06,825	4,01,862	3,80,112	1,07,073	1,68,977	7,86,937	6,77,912	
Total for 1886-87 ...	7,31,952	4,27,136	3,95,35	1,09,169	1,80,205	11,27,277	7,16,510	

APPENDIX A.

STATEMENT OF BOUNDARY WORK DONE DURING THE YEAR.

	Boundary Lines.				Loose stone walling erected.		Trenches.				Pillars.		Remarks.
	Newly demarcated.		Cleared.				Newly dug.		Cleared.		Newly erected.	Repaired.	
	Mls.	Chs.	Mls.	Chs.	Mls.	Chs.	Mls.	Chs.	Mls.	Chs.	No.	No.	
Hazara Division	4	40	...		...		...		...		...	89	The boundary lines vary in width from 5 to 20 feet. The section of the boundary trenches is 2′ × 2′. The pillars are of various kinds; but the information given in Divisional reports is not in all cases sufficiently complete to enable them to be classified. In Montgomery, wooden posts are used. In Lahore, boundary pillars are repaired by zamindars.
Rawalpindi	...		96	60	0	18	...		...		20	6	
Chamba	...		...		...		...		...		8	106	
Kangra	...		117	40	...		...		...		165	1,572	
Kulu	...		...		...		...		...		476	659	
Bashahr	137	60	...		...		...		...		460	30	
Jhelum	...		...		...		...		...		1,431	2,591	
Chenab	34	42	89	35	...		15	49	...		56	40	
Lahore	...		...		...		70	37	6	50	73	..	
Multan	53	00	48	20	...		9	00	...		283	407	
Montgomery	...		32	53	...		..		...		65	...	
Phillour	4	56	..		...		0	40	...		...	...	
Total	234	38	384	48	0	18	95	46	6	50	3,037	5,500	

APPENDIX B.

STATEMENT OF AREAS FOR WHICH WORKING PLANS HAVE BEEN PREPARED.

Forest or tract.	Reserved.	Protected.	Unclassed.	Total area in acres.
Plans Sanctioned.				
Chamba	75,705	..	...	75,705
Changa Manga	20,173	...	...	20,173
Bhera	...	...	1,16,202	1 16,202
Khanpur	31,786	...		31,786
Shahdara	1,254	...	...	1,254
Total sanctioned	1,28,918		1,16,202	2,45,120
Plans under examination.				
Kalesar	11,829			11,829
Murree and Kahúta	71,[illegible]	43,358		1,14,892
Total under examination	83,363	43,358	...	1,26,721
Grand Total ...	212,281	43,358	1,16,202	3,71,841

APPENDIX. (C).

STATEMENT OF ANIMALS IMPOUNDED.

Division.	Cattle and buffaloes.	Sheep and goats.	Camels.	Horses and asses.	Total.	Total of 1886-87	
Hazara	1,285	2,579	6	9	3,879	3,497	
Rawalpindi	3,583	9,260	626	42	13,531	10,702	
Chamba	...	...	...	...	...	...	
Kangra	1,879	444	...	58	2,381	2,866	
Kulu	11	...	...	1	12	...	
Jhelam	656	1,008	20	28	1,712	2,366	
Chenab	3,314	2,040	189	72	5,624	5,154	
Lahore	4,954	3,222	210	139	8,525	7,853	
Mooltan	2,972	1,146	420	103	4,641	4,352	The total for 1886-87 was erroneously shown as 3,282 in the report for last year
Montgomery	2,508	943	175	39	3,665	2,763	
Phillour	490	350	...	16	856	1,135	
Total ...	21,652	21,021	1,646	507	44,826	40,688	

APPENDIX (D).

IMPORTS OF TIMBER AND BAMBOOS DURING 1887-88.

River by which timber was imported.	Territory from which the timber came.	Deodar logs.	Pine logs	Other logs.	Sleepers.	Scantlings.	Bamboos.	Miscellaneous timber.	
Ravi ...	Kashmir ...	4,741	1	...	19,957	7,377	2,225	67,509	
Beas ...	Mandi and Kapurtlala ...	...	...	...	1,26,810	9,311	...	80	
Sutlej ...	Native States	...	1	...	73,984	1,973	86,600	52	
Jhelam ...	Kashmir	3,050	430	...	44,709	...	...	1,68,941	
Chenab ...	Do.	15,586	1,287	..	38,098	...	6,455	.	
Indus ...	Independent Kunar, Swat, Bajaur, Duber, Kandia, Jalkot and Tangir ...	10,634						66,997	Shingles
	Total ...	34,011	1,719	...	3,03,558	18,661	95,280	3,03,579	

Appendix E.

STATEMENT SHOWING THT QUANTITY AND DESCRIPTION OF TIMBER IMPORTED FROM KASHMIR INTO BRITISH TERRITORY.

River by which timber was imported.	Territory from which the timber came.	Deodar logs.	Pine logs.	Other logs.	Sleepers.	Scantlings.	Miscellaneous timber.	Bamboos and scraps, &c.	Ballies.
Jhelum ...	Kashmir ...	6,254	2,222	...	5,483	...	40,002	...	...
Chenab ...	Do. ...	10,820	2,816	...	1,31,334	...	1,476	...	...
Ravi ...	Do. ...	4 094	807	...	5,275	...	8,548	5,320	...
	Total 1879-80 ...	21 108	5,845	...	1,42,092	...	50,026	5,320	...
Jhelum ...	Kashmir ...	8,619	1,520	...	5,352	...	...	...	...
Chenab ...	Do. ...	35.098	4,716	...	2,18,854	...	...	...	...
Ravi ...	Do. ...	2,950	900	...	33,597	...	...	...	....
	Total 1880-81 ...	46,667	7,136	...	2,57,803	...	...	...	...
Jhelum ...	Kashmir ...	5,906	1,038	...	7,456	37,419	...	125	1,99,032
Chenab ...	Do. ...	10,354	1.519	...	1,64,738	...	...	63,362	38,105
Ravi ...	Do. ...	4,174	...	...	7,880	66,611	...	52,339	7,136
	Total 1881-82 ...	20,434	2,557	...	1,80,074	1,04,030	...	1,15,826	2,44,278
Jhelum ...	Kashmir ...	12,663	162	...	4,317	1,60,474	...	10,866	...
Chenab ...	Do. ...	10,557	841	...	1,25,473	...	...	30,381	...
Ravi ...	Do. ...	5,327	796	...	1,762	15,810	...	1,030	...
	Total 1882 83 ...	28,547	1,799	...	1,31,552	1,76,284	...	42,277	...
Jhelum ...	Kashmir ...	...	...	...	44	2,46,768	...	...	...
Chenab ...	Do. ...	22,212	1,284	...	2,20,081	...	...	59,684	...
Ravi. ...	Do. ...	8,129	1,356	...	11,505	21,427	...	...	...
	Total 1883-84 ...	30,341	2,640	...	2,31,630	2,68,195	...	59,684	...
Jhelum ...	Kashmir ...	11,686	421	...	51,045	...	...	1,74,956	...
Chenab ...	Do. ...	11,706	990	...	1,69,171	...	...	54,217	...
Ravi ...	Do. ...	3,805	242	...	9.044	49,240	...	300	...
	Total 1884-85 ...	26,197	1.653	...	2,30,160	49,240	...	2,29,473	...
Jhelum ...	Kashmir ...	12,261	869	...	661	...	1,55,253	...	...
Chenab ...	Do. ...	25,047	2,427	...	1,60,640	...	...	41,197	...
Ravi ...	Do. ...	3,658	10	...	720	361	85,000	...	...
	Total 1885-86 ...	40,966	3,246	...	1,62,021	361	2,40,253	41,197	...
Jhelum ...	Kashmir ...	3,950	925	...	74,499	...	84,495	...	...
Chenab ...	Do. ...	10,257	712	...	1,06,426	...	...	18,778	...
Ravi and Ujh ...	Do. ...	7,084	96	...	27,724	19,733	82,970	...	...
	Total 1886-87 ...	21,291	1,733	...	2,08,649	19,733	1,67,465	18,778	...
Jhelum ...	Kashmir ...	3,050	430	...	44,609	...	1,68,941	...	...
Chenab ...	Do. ...	15,586	1,287	...	38,098	...	...	6,455	...
Ravi ...	Do. ...	4,741	1	...	19,957	7,377	67,509	2,225	...
	Total 1887-88 ...	23,377	1,718	...	1,02,664	7,377	2,36,450	8,680	...